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1997

STATE OF OHIO
George V. Voinovich, Governor
DEPARTMENT OF NATURAL RESOURCES
Donald C. Anderson, Director
DIVISION OF GEOLOGICAL SURVEY
Thomas M. Berg, Chief

Geol Survey

1997 REPORT ON OHIO MINERAL INDUSTRIES

WITH

DIRECTORIES OF REPORTING COAL AND INDUSTRIAL MINERAL OPERATORS





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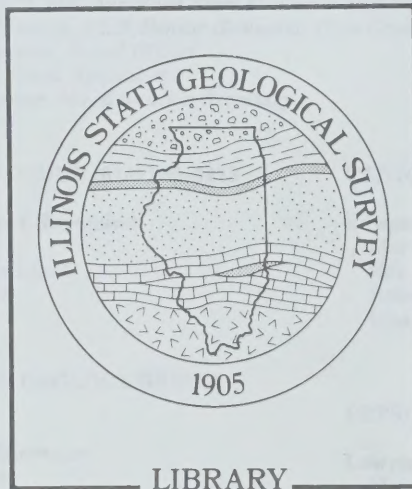
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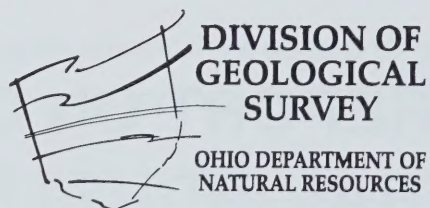
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COAL AND INDUSTRIAL MINERAL OPERATORS

compiled by

Mark E. Wolfe

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Front-cover illustrations: Background: View of a reclaimed lake at the Hilltop Basic Resources, Inc. Fairborn Plant. Average depth of the lake is 40 feet. Waterfowl, fish, and other animals now inhabit the area. Wildlife habitat improvement is an extremely important aspect of reclaimed sand and gravel operations, enhancing land-use options in a heavily populated state such as Ohio. Photo by Michael D. Williams.

Inset photos : Visitors enjoying the many educational displays and activities at Hilltop Basic Resources Fairborn Plant open house held September 13, 1997. The Fairborn sand and gravel operation began in 1957, and today covers an area of 650 acres and employs 25 people. In addition to the numerous exhibits, tours of the facility were led by experienced employees. Photos courtesy of Richard E. Martin, Environmental Manager for Hilltop Basic Resources, Inc.

FOREWORD

For 12 years, Sherry L. Weisgarber, a staff geologist with the Division of Geological Survey, prepared the annual *Report on Ohio mineral industries*. Fulfilling the requirements of the Ohio Revised Code, she compiled the mineral-production statistics and assembled the directories of coal and industrial-mineral operators for the years 1985 through 1996. Early in 1998, Sherry made a decision to leave the Geological Survey and accepted the position of Managing Director of the Ohio Aggregates Association. We were sorry to see Sherry leave the Survey, but were glad that she chose to continue a career of service to Ohio's mineral producers.

When Sherry left the Geological Survey, the task of producing the report for 1997 was assigned to staff geologist Mark Wolfe. At the same time, we made a decision to switch to more modern and more powerful database-management software. Changing geologists and changing software has caused some delays. As always, there are learning curves to deal with and technical hurdles to jump. Although the *1997 Report on Ohio mineral industries* is published later than usual (we usually try to have it finished by late August), we expect that using new database-management software will speed up preparation of succeeding reports. We appreciate your patience and want you to know that the annual report is one of the highest priorities of the Division of Geological Survey.

On a different subject, I hope that all of Ohio's mineral and fossil-fuel producers will join me in my effort to promote legislation that will require accurate and complete assessment of valuable mineral resources as Ohio moves toward more resolute land-use planning. I believe it is critical to identify and prioritize lands containing valuable mineral resources as the state considers long-range land-use strategies. For example, it is important to identify the location of high-quality sand-and-gravel deposits before they are covered by golf courses or shopping centers. We need to plan our land use sequentially and strategically so that such deposits can be extracted prior to other land uses. If we cover a prime sand-and-gravel deposit with a golf course, we need to understand that there is a price to pay: we will have to pay three to four times the cost for such material to be transported from a more distant location. Giving consideration to valuable mineral lands can easily put such areas in competition with a host of other land uses. But giving consideration to location, quantity, and quality of valuable mineral resources in the land-use planning process at least allows for informed decisions that will affect many future generations of Ohioans.

Thomas M. Berg
State Geologist and Chief

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OPEN HOUSES AS PUBLIC RELATION TOOLS

INTRODUCTION

by Mark E. Wolfe
Ohio Department of Natural Resources,
Division of Geological Survey

Every minute of every day, residents of Ohio rely on and benefit from the state's mining industry. Electricity is produced from coal, highways use sand and gravel or limestone aggregate, buildings are constructed of brick made from clay and shale, wallboard is made with gypsum, and we flavor our food with the mineral salt. Mining directly employed more than 8,000 people in Ohio in 1997, but, much like a pebble in a pond, the economic consequences ripple through the economy, greatly enhancing our standard of living.

Even after 150 years of extensive exploration and mine development, 99 percent of the U.S. land surface has never been touched by mining. Because of the most stringent environmental regulations in the world, the U.S. coal industry has reclaimed 2 million acres of land, an area larger than the state of Delaware. Sand and gravel and limestone/dolomite operators have also successfully reclaimed areas that are now being productively used by the public. Noteworthy examples in Ohio include The Wilds endangered species preservation area in Muskingum County, the Ohio Power recreation area in Morgan County, and the many housing and office developments in urban areas of the state.

How does the mining industry convey to the public the essential economic nature and environmental awareness of the business? An active and aggressive public information campaign is the solution. Partnerships can be forged with land owners, local and state officials, future decision-makers (children), and educators. Communication and information dissemination are key components affecting public perceptions of the mining industry. Open houses are an important component of educational and public relations efforts.

Many Ohio mineral industry operators hold open houses. For example, the Rogers Group Sandusky Crushed Stone Company at Parkertown in Erie County held its sixth annual open house in 1998. Even though tangible benefits are hard to measure, the Olen Corporation felt that the open house held at the St. Louisville operation (Licking County) in 1996 has led to a general improvement in relations with local officials and land owners. The Olen Corporation specifically targeted neighbors and children because it was important to educate them on exactly what is done at the plant and to reduce concerns about contamination of the nearby Licking River. Coal mine operators have a more difficult time hosting general open houses, but limited open houses and small group tours can be effective educational devices. For example, Southern Ohio Coal Company led a group of geologists from three states and Germany on a tour of the Meigs No. 31 longwall mine in Meigs County as part of the 1998 Geological Society of America meeting.

The following article provides details on an open house hosted by Hilltop Basic Resources, Inc., at their Fairborn operation in Greene County. Even though every mining operation is unique, it is hoped that information contained in this article can be useful in evaluating and hosting a successful open house.

PLANNING AN OPEN HOUSE

by Richard E. Martin
Environmental Manager,
Hilltop Basic Resources, Inc.

So you just got the word that the corporate office wants to hold an open house at the plant. Where do you go from here? Well, if you have a moment, the wise thing to do would be to sit back, take a note pad, think about all the relevant issues involved, and write a planning outline. But who has a free moment? You already have a desk covered with projects, none of which are completed, and now you have one more. You can think of a couple of things, but they can wait. After all, the open house is this summer and that's plenty of time. You go back to the tasks at hand.

The next thing you know, the open house is a month away and planning, personnel, time frames, cost, etc., are all becoming big issues. It's about now that you realize that you may have underestimated the amount of additional work required to successfully pull this off. Before this happens, let's return to the present. It looks like you have a moment to sit back and reflect now since you had time to read this far. So let's read on and learn from others who have traveled this road and possibly pick up some new ideas.

What is the purpose of your open house? Write it down. The purpose statement is needed to keep the whole project in focus and guide the people involved. We stated ours as "The purpose of the open house is to show the general public, the educational community, and the community leaders the value of mining."

The next step should be to define your goals. The goal we decided on was to provide the attending public with excellent educational exhibits showing the local geology, wildlife habitat enhancement, and postmining reclamation. We also had some secondary goals: to keep it entertaining and enjoyable for the families, to provide a tour of the property, to help the public develop an understanding of who we are and what we do, and to give the public the opportunity to meet and visit with our employees.

One person cannot do the work of many. Get your employees involved in the process from the start. It's their place of employment. They have a vested interest in its success. Use the open house as an opportunity for them to show pride in their work. Don't direct the project as if it were just another job task. The public is very keen on detecting how your employees feel about their work place. The sincerity of the loader operator or the dispatcher are the conversations on which the public makes its value judgment about mining and your business. The employees attach a face and name to that corporate logo in the minds of the public. A sharp image at the open house calls for listening to all employee ideas in the planning phase.

We felt the best approach was to form an open house committee. Twelve areas were defined to address in our planning. We combined these into six functional task areas: Technical/Educational, Food/Amusements, Registration/Exit, Equipment/Vendors, Advertisement/Tours, and Security/Parking. Initially, you could start your planning meetings with a chairman and only one supervisor for each area. They will become your planning committee. The supervisors should be the team leaders responsible for

those functional areas.

As the planning progresses, volunteers will be needed to augment each team. It helps to hold planning meetings at least monthly for just the team leaders. This schedule keeps the project more focused on the purpose and attainment of the goals. Team leaders can help by presenting the ideas of their team to the planning committee. As the project continues, the number of volunteers on any team may grow progressively; every effort should be made to keep these employees updated on what is accomplished and what remains to be done. Good committee minutes are essential as planning details grow and it becomes imperative to track individual assignments.

Before we take a moment to discuss each of the six task areas to find out what they encompass and who's responsible, let's look at the key unknown facing the planning committee. The big question in that first meeting is how many people will attend the open house. This number drives and controls many of the details in later planning. It's an unknown, just like what the weather will be on the date of the open house. Treat it as you would a mineral reserve estimate. Do a little exploration. Talk to other companies who have done similar projects. Review the proposed advertising for coverage and rates of response. Many media services, ad agencies, radio, television, or local chamber of commerce offices can help in this regard. Once you have an estimate it's much easier to tackle the planning.

The first and most important area, based on our stated purpose, was the Technical/Educational exhibit. This exhibit was manned by the company engineer, environmental manager, and lab technicians. The exhibit displayed examples of our mineral products, computerized mine planning, geologic information, aerial photos, product quality control, laboratory testing, reclamation, and environmental projects we had completed. For the older kids it also included some games involving aerial photo interpretation and prizes such as rock kits and magnifying glasses. As a visual draw to the exhibit we had several VCR's running continuously showing films on various aspects of mining. Plenty of free handout materials are important. They carry the message about mining long after the people leave. The image that mining companies can be good neighbors and that you gave them something is retained after their visit.

To enhance our community outreach program we had

additional educational materials for schools and teachers. Teachers were able to sign up for a program where we come to their classrooms for mining presentations. Educational materials in this program are provided free to the teachers and the students. Plant tours structured for school groups are particularly welcomed at times during the year when the students are discussing the earth sciences. Using the open house to promote this idea to the general public supports our purpose statement. If you don't promote the civic and community actions your employees are involved in, the importance of mineral resources may go unrecognized. It's all part of educating the general public and community leaders about the role of mining and its value in the state of Ohio.

Ohio has some great resources to support you in this educational effort. An excellent starting point is the Ohio Department of Natural Resources (ODNR). At the ODNR, Division of Geological Survey, they know the geology of Ohio and offer a wide variety of services and products such as maps, reports, GeoFacts, etc., that can assist any producer of minerals in the state. If you haven't contacted them lately I recommend you do so. Their assistance can go well beyond the needs of the open house. After all, they're also in the business of promoting Ohio's mineral resources.

Additional support can be found at the ODNR, Division of Mines and Reclamation. You should already know your local field inspector. This person has a detailed knowledge of your mine and reclamation planning. The pride you have in showing the public a beautifully reclaimed, well-landscaped mine site is greatly enhanced when the public can speak with and hear from an inspector about your full compliance efforts.

Many of our properties have a broad range of animal habitat. The ODNR, Division of Wildlife was invited to display and educate the public about wildlife habitat enhancement in postmining operations. The public perceptions change when they understand that sight and sound barriers can serve as upland game runs and sources of food supplies for animals. Many people are amazed to learn how lakes and water impoundments at mine sites can contain and support a wide variety of species. Flume ponds that may be viewed as neglected land take on a new meaning when the functions of wetlands are explained.

ODNR personnel are dedicated people who are very knowledgeable in particular aspects of the mining business. Any producer considering an open house should avail himself of these resources.



Wanda Smith (seated) and Dick Martin (center) of Hilltop Basic Resources, Inc., explaining computerized mine planning at the Technical/Educational exhibit.



Tammy York from the Xenia District office of the ODNR, Division of Wildlife talking to a customer at the Division's exhibit.

The area of Food/Amusements requires careful consideration. You don't want to run out, but, by the same token, you don't want an excess at the end of the day. We recommend hiring an outside catering service. Their expertise can be of considerable help. Discuss contingencies should you have an overflow crowd and plan for a unit price per person. Consider other concepts like donating excess food to homeless shelters. Games for the young children attending are a must. Try using your product in the display. We made a sand pile game that contained polished agates redeemable at the game tent for various prizes. Amusements such as magicians, clowns, face painting, having a picture taken on heavy equipment, and free cotton candy and popcorn all



A child selecting a prize from the games table in the Food/Amusements area.

add excitement to the child's experience. The adults were entertained with a live band during and after lunch. You can enhance your image by choosing your locations carefully. We set up our food tent on the bank of a reclaimed well-landscaped lake that has a very natural setting. The sound of the band and scenic surroundings made the event seem more like a garden party. The effect would not have been the same in the plant yard or the current excavation site.

The Registration/Exit function is the first and last impression a visitor may have of your operation. We wanted to track who came and receive feedback as to their opinion of the open house. The registration provided name tags and the opportunity for our CEO to extend a personal welcome. Attendees received souvenirs and a game ticket, plus a gift on exit. Guests also were registered for door prizes and were given a map of the exhibit area, bags for the handouts they received during the day, and brochures and literature about the company. Volunteer staffing came mainly from the corporate office and the secretaries.

The Equipment/Vendors display was manned by our fleet personnel. Many of our vendors were willing to bring new equipment to place on display. The kids really love being able to see equipment up close and have a hands-on experience. By inviting our contractor customer base, we provided justification for the vendors to display equipment not normally marketed to the general public. The vendors were provided with a lakeside site to display the equipment and a tent in which to pass out literature and discuss their products.

The Advertisement/Tours area was the primary responsibility of the sales department. They handled such things



A child letting his imagination soar on equipment in the Equipment/Vendors display area.

as newspaper ads, invitations, and public contacts. We developed brochures that were generic to all company operational locations. This approach permitted the sales department to use the same materials in client contacts as well as for future open houses at other company locations. Promotional items such as hats, T-shirts, pens, key rings, cups, note pads, and bags were bought in quantities sufficient to accommodate the open house as well as projected sales needs. Thinking about the larger purpose and incorporating that into the project resulted in an increased discount on material we were going to acquire at a later date anyhow.

The tour was the highlight for many people. We used air-conditioned tour buses, and each tour took about 30 minutes. The guests were briefed on the history of the company, the extraction operation, the lakes, products, equipment, plant, reclamation, and environmental and general operational facts. The bus picked up participants at the lake and the tour began at the extraction point, followed the material flow to finished product, and then to reclaimed operational sites. A written script is an extremely useful tool. It assures that all your visitors get the same general briefing. Remember, this is the story you want the general public to have when they leave.



A serene lake in a reclaimed mine site.

Security/Parking was the last area of our planning but not the least in importance. Liability with large groups of visitors who are unaware of the hazards around a mine site is always of concern. We did several things here to limit exposure and control the situation. First, all nonemployee parking was kept off site. Guests were picked up at the parking lot and transported by bus to the lake and display exhibits. At the time of their tour the bus picked them up for a tour of the mine site, plant, and lake areas, then returned them to the display exhibit. No one was permitted off the tour bus during the tour, and plant and heavy equipment were nonoperational for the day. Employees provided security in the parking lot and at the road crossings. The local fire department EMT rescue squad does its water-rescue training on our lakes. We invited them to display at and participate in the open house. This proved to be a good community-service project as well as providing that extra measure of safety for the guests. The company safety director did a site inspection, resulting in small planning details like placing bee traps in the food and dining tents. Discussions about the program with our insurer were done early in the planning.

When the open house was over, what were the final results? First and foremost, we accomplished our stated purpose. The general public saw the value of mining to their community. We received letters of appreciation and thank you calls from many of the guests. Neighbors were particularly pleased to be invited and seemed very appreciative of the event. As a result of the educational contacts, we made four classroom presentations and provided two plant tours to school groups. Community leaders saw the value of a local mining operation. Our vendors were well pleased with the opportunity and expressed interest in participating in future open houses. Our employees experienced a sense of pride in a job well done and the positive comments they received from the public. We documented our results by

having each member of the planning committee submit a written report for the six functional areas. These critiques will be used to improve future open houses.

Feedback resulted in identification of some items that we intend to change in future events. As an example, we were told later by several people who drove by that they thought the event was a private company picnic. Signs on the day of the event need to indicate that the general public is invited. Promoting the event at local chamber of commerce meetings two months in advance would have increased the ratio of local business people attending. We did not conduct radio advertisements out of concern that we could not anticipate the response beyond the adjacent communities. Limited radio or television spot ads may have been appropriate. Newspaper advertising drew just over 600 people. Our recommendation is to talk with a local media service about the rate of response you can expect from your advertising campaign.

Carefully consider the criteria used to capture the true cost of your open house. You will find that items such as last-minute reclamation, painting, new plant signs, gates, sales promotion materials, paving, and many others are added into the open-house budget. A strong case can be made that these items are required for the open-house image, but they were probably needed long before the first planning meeting. Costs of \$75 to more than \$100 per person attending are easily reached, depending on how you wish to reflect these items in your budget.

Every company will approach the planning for their own open house in a slightly different form. The ideas presented here are only a guide as to how one Ohio company did their planning. The majority of Ohio citizens have little firsthand knowledge about Ohio's mineral industries. Why not change that by holding an open house this year? It's both beneficial to you and to the community in which you operate.

1997 OHIO MINING ACTIVITIES IN BRIEF

Reports were filed in 1997 for 217 coal-mining operations, including 3 mines with their own coal-washing facility. Coal production was reported from 142 of these 217 operations. Reports also were filed for 42 separate coal-

washing plants and associated facilities. Of 660 industrial-mineral-mining operations known to be operating in 1997, 500 operations were active. A total of 50 mines reported production of multiple mineral commodities. Of this total, 26 mines reported production of multiple industrial minerals; 18 mines reported production of multiple industrial minerals and coal; and 6 mines reported production of coal and one industrial mineral. There were 638 new wells completed for oil and gas in 1997, of which 480 were productive and 158 were dry.

The total value¹ of coal was \$743,430,011 in 1997; the value of oil and gas was \$465,751,591; and the total value¹ of all nonfuel industrial minerals was \$688,693,320 in 1997.

¹Includes reported and estimated values. Some operations reporting sales did not report a value for those sales. A countywide- or statewide-average price per ton was calculated for each industrial mineral commodity based on sales for which the value was reported. A countywide average price per ton was calculated for coal based on sales for which the value was reported and method of production. These calculated averages were used to estimate the value of the sales for which the actual values were not reported.

TABLE 1.—1997 Mineral sales and production in Ohio

Commodity	Sales ¹	Production ²	Value ³
Coal	30,288,298 tons	30,635,239 tons	\$743,430,011
Limestone and dolomite	77,536,923 tons	78,471,765 tons	\$322,348,111
Sand and gravel	57,251,127 tons	57,755,539 tons	\$244,135,841
Salt	4,227,508 tons	4,277,743 tons	\$67,042,235
Sandstone and conglomerate	2,531,065 tons	2,914,385 tons	\$38,995,076
Clay	1,485,417 tons	1,533,677 tons	\$8,519,917
Shale	2,857,603 tons	3,712,118 tons	\$5,193,780
Gypsum	264,154 tons	264,154 tons	\$2,377,386
Peat	17,546 tons	17,546 tons	\$80,974
Gas	⁴	117,408,373 MCF ⁵	\$313,863,968
Oil	⁴	8,593,359 barrels	\$151,887,623

¹Includes material for captive use.

²The production figures for the industrial minerals are estimates. Many operators do not know actual production. Some operators report estimates, other operators do not report any production. For those operators who do not report production, production is assumed to equal sales.

³The FOB value of industrial minerals sold was estimated for those mines which failed to report this information and for those producing material for captive use. These estimates were calculated using a countywide- or statewide-average price per ton calculated on reported FOB values.

⁴Figure not available.

⁵Thousand cubic feet.

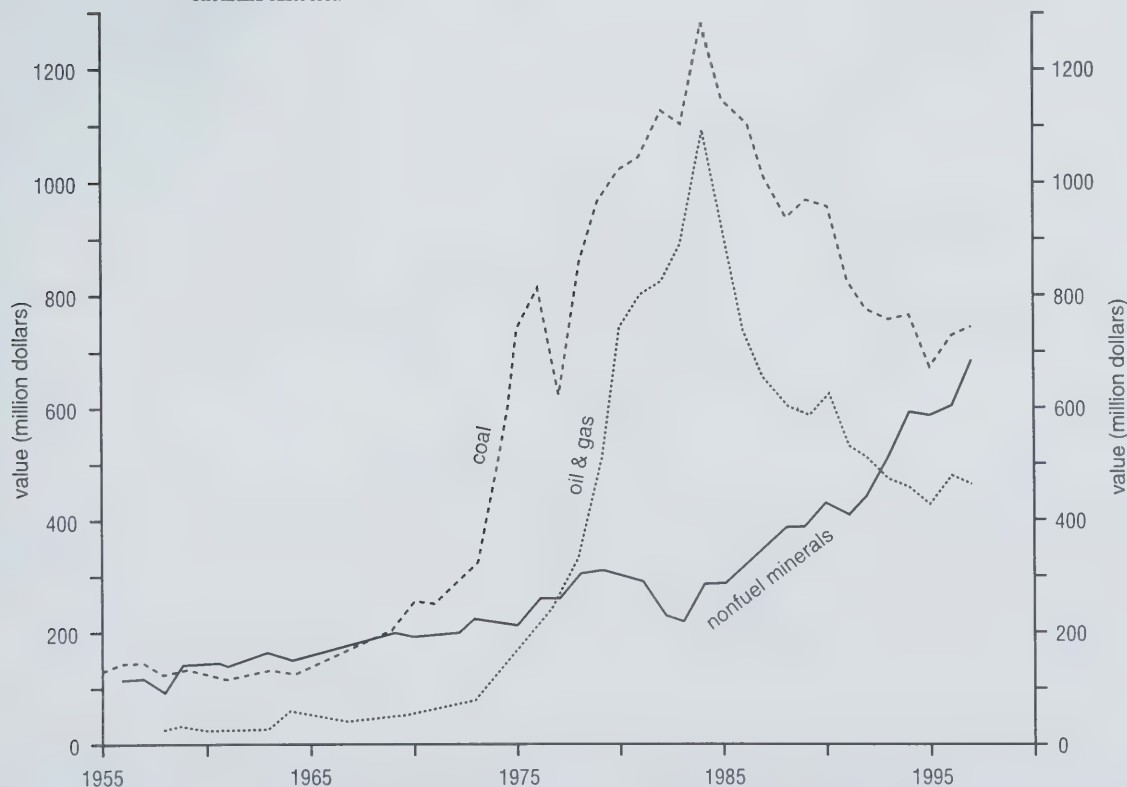


FIGURE 1.—Value of coal, nonfuel minerals, and oil and gas in Ohio.

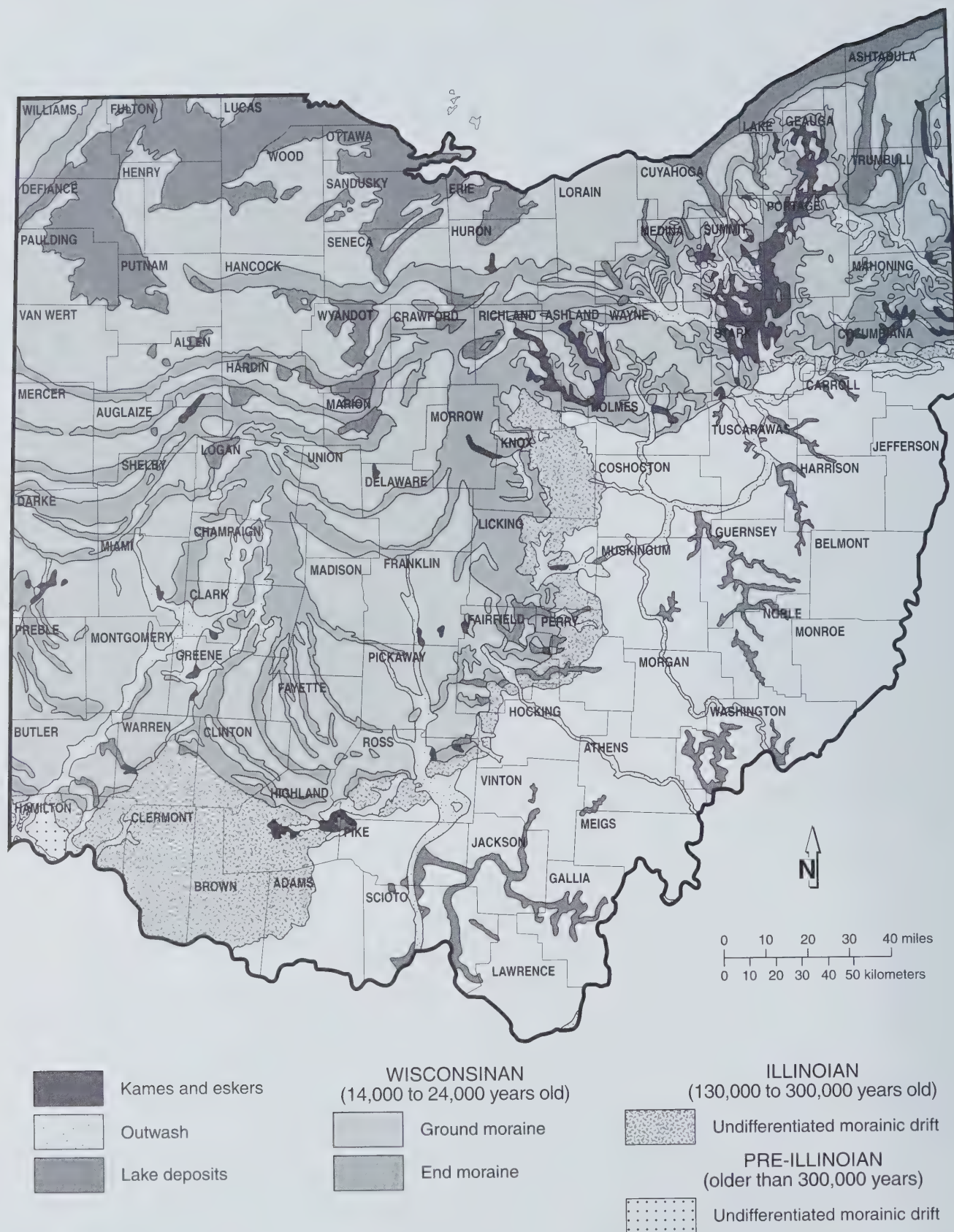
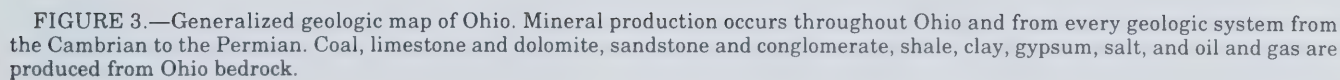


FIGURE 2.—Generalized map of the glacial deposits of Ohio. Continental glaciers advanced over the Ohio landscape several times during the Ice Age. These glaciers deposited unconsolidated materials on top of the bedrock over nearly two-thirds of the state. Most of Ohio's sand and gravel production comes from kames, eskers, and outwash, which were deposited by meltwater from the glaciers. Other glacially derived industrial minerals in Ohio include peat and clay.



COAL

Coal was produced by 52 companies at 142 mines in 22 Ohio counties during 1997. Production increased 8.2 percent from 1996, totalling 30,635,239 tons in 1997; 13,156,002 tons (42.9 percent of total production) were produced at 132 surface mines, and 17,479,237 tons (57.1 percent of total production) were produced at 10 underground mines. Tonnage from underground production exceeded tonnage from surface production, continuing a trend that began in 1995. Of 23 coal-producing states, Ohio ranked 10th in 1997. The top five states, in descending order of production, are Wyoming (281.6 million tons), West Virginia (173.0 million tons), Kentucky (155.8 million tons), Pennsylvania (73.2 million tons), and Texas (53.7 million tons). These five states produced 67.7 percent of the nation's coal in 1997. Ohio produced 2.8 percent of the nation's coal in 1997. The top five coal-consuming states, in descending order of consumption, are Texas, Indiana, Ohio, Pennsylvania, and Illinois. These five states used 33.5 percent of the total coal consumed by all 50 states in 1997.²

In comparison to 1996, there were 2 more mines reporting production of 50,000 tons or less and 6 more mines producing between 50,000 and 500,000; there was a net increase of 8 mines in 1997.

The five leading counties for 1997 production were Belmont, Meigs, Vinton, Monroe, and Harrison Counties; these counties produced 65.8 percent of the 1997 total production. A total of 30,288,298 tons of coal were sold in 1997; total value³ was \$743,430,011. The average price per

ton of all coal sold was \$24.55; surface-mined coal averaged \$24.07 per ton and underground-mined coal averaged \$24.91.

In underground mining, 75.2 percent was produced by longwall mining and 24.8 percent of the coal was mined by continuous miner; no coal was produced by conventional mining in 1997. In surface operations, 93.4 percent was mined by conventional surface methods, and 6.6 percent of the coal produced was auger mined.

The Pittsburgh (No. 8) coal was the most heavily mined seam, followed by the Clarion (No. 4A), Meigs Creek (No. 9), Middle Kittanning (No. 6), and Lower Kittanning (No. 5) seams. Coal produced from these five seams constituted 82.0 percent of the total 1997 production.

A total of 20,929,421 tons of washed coal were reported in 1997. Reports from 12 coal-washing plants indicate an average 35.6 percent loss in washing.

Trucking was the primary means of coal disposition, carrying 40.4 percent of the total sales. Conveyor belts carried 30.2 percent, rail transported 15.5 percent, and water carried 13.9 percent of the coal sold in 1997. A total of 470,068 tons (1.5 percent) of the coal produced was reported as stored.

The total average annual employment reported in 1997 was 3,428 employees; 1,957 of these were production employees. Production employees worked an average of 136 days producing coal in 1997. The average annual wage earned by all production employees was \$47,457 based on those employees for whom wages were reported. The average annual wage for surface-mine production employees was \$41,396 and the average annual wage for underground-mine production employees was \$52,188. Wages earned by all employees totalled \$172,902,887 in 1997.

²Information from U.S. Department of Energy, Energy Information Administration.

³Includes reported and estimated values. See footnote 1, p. 5.

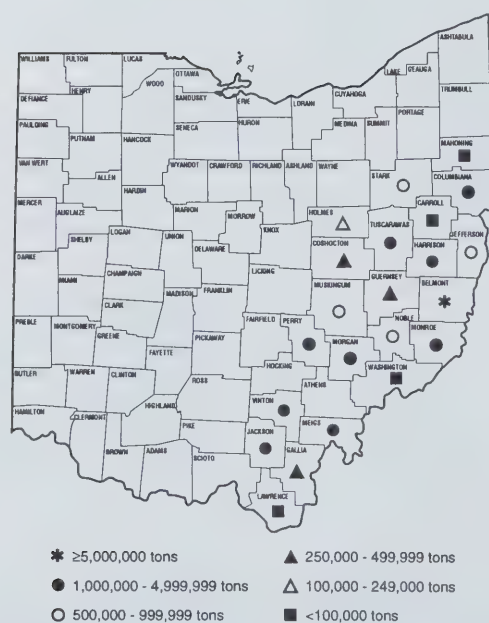


FIGURE 4.—Coal production in Ohio in 1997, by county.

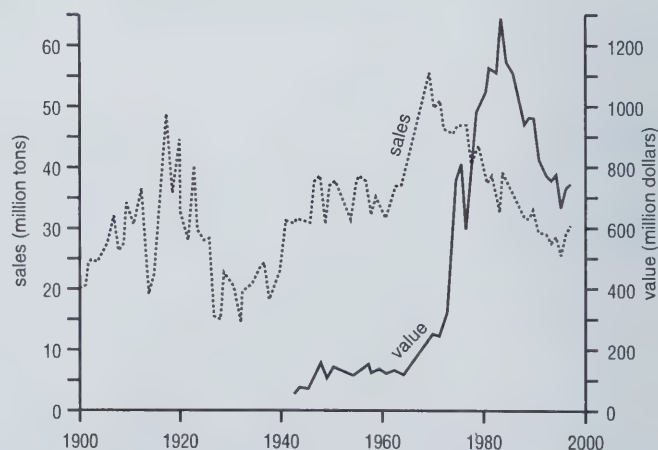


FIGURE 5.—Sales and value of coal in Ohio.

TABLE 2.—1997 Coal production and sales by county, in descending order of production

County	Production (tons)	Sales (tons)
Belmont	6,429,149	6,351,560
Meigs	4,629,872	4,602,475
Vinton	3,584,007	3,585,074
Monroe	3,243,474	3,132,360
Harrison	2,280,972	2,143,490
Morgan	1,574,663	1,578,832
Tuscarawas	1,167,016	1,166,932
Jackson	1,148,512	1,148,512
Perry	1,114,029	1,115,219
Columbiana	1,081,783	1,088,644
Jefferson	825,922	828,600
Noble	736,604	735,827
Muskingum	690,023	685,935
Stark	584,517	584,517
Guernsey	467,715	465,399
Coshocton	435,936	433,877
Gallia	334,664	334,664
Holmes	123,890	123,890
Washington	77,718	77,718
Carroll	60,353	60,353
Mahoning	37,241	37,241
Lawrence	7,179	7,179
22 counties	30,635,239	30,288,298

TABLE 3.—1997 Ohio coal production by production-size group and change from 1996

Production-size group	1997		Change from 1996 (short tons)
	Number of mines reporting	Production (short tons)	
1,000,000 tons and over	6	18,012,553	+276,071
500,000 to 999,999 tons	3	2,072,700	+923,191
250,000 to 499,999 tons	10	3,735,633	+803,540
100,000 to 249,999 tons	22	3,646,827	-152,125
50,000 to 99,999 tons	27	1,939,781	+494,342
25,000 to 49,999 tons	22	806,506	+49,877
Under 25,000 tons	52	421,239	-83,430
TOTAL	142	30,635,239	+2,311,466

TABLE 4.—1997 Ohio coal production by county and mining method

County ¹	All methods (short tons)	Total number of mines	Underground				Surface			
			Number of underground mines reporting	Production (short tons)			Number of surface mines reporting	Production (short tons)		
				Total underground	Longwall	Continuous miner		Total surface	Strip	Auger
Belmont	6,429,149	18	1	5,101,747	4,074,424	1,027,323	17	1,327,402	989,995	337,407
Carroll	60,353	5					5	60,353	50,152	10,201
Columbiana	1,081,783	11	3	673,336	0	673,336	8	408,447	325,466	82,981
Coshocton	435,936	10					10	435,936	431,038	4,898
Gallia	334,664	2					2	334,664	334,664	0
Guernsey	467,715	7					7	467,715	416,620	51,095
Harrison	2,280,972	8 ²	1	1,578,683	0	1,578,683	7 ²	702,289	697,694	4,595
Holmes	123,890	3					3	123,890	123,890	0
Jackson	1,148,512	6					6	1,148,512	1,148,512	0
Jefferson	825,922	8	2	477,480	477,480	0	6	348,442	280,416	68,026
Lawrence	7,179	2					2	7,179	7,179	0
Mahoning	37,241	1					1	37,241	37,241	0
Meigs	4,629,872	2	2	4,629,872	4,210,463	419,409				
Monroe	3,243,474	1	1	3,243,474	2,809,651	433,823				
Morgan	1,574,663	1 ³					1 ³	1,574,663	1,553,843	20,820
Muskingum	690,023	2					2	690,023	689,384	639
Noble	736,604	6					6	736,604	735,156	1,448
Perry	1,114,029	7					7	1,114,029	996,605	117,424
Stark	584,517	9					9	584,517	550,305	34,212
Tuscarawas	1,167,016	28					28	1,167,016	1,029,253	137,763
Vinton	3,584,007	5 ²	1 ⁴	1,774,645	1,563,058	211,587	5	1,809,362	1,809,362	0
Washington	77,718	1					1	77,718	77,718	0
TOTAL	30,635,239	142	10	17,479,237	13,135,076	4,344,161	132	13,156,002	12,284,493	871,509

¹Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.²Does not include mines extending into this county from adjoining counties.³This mine extends into Morgan County from Noble County and is not included in the total number of mines.⁴This mine extends into Vinton County from Meigs County and is not included in the total number of mines.

TABLE 5.—1997 Ohio coal production by county and month

County ¹	Production (short tons)												
	Total annual	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	6,429,149	447,699	482,827	599,025	565,093	354,044	523,049	551,007	583,117	505,109	628,015	617,803	572,361
Carroll	60,353	12,983	12,983	12,854	4,509	2,524	2,035	2,035	2,295	2,035	2,035	2,035	2,030
Columbiana	1,081,783	86,828	78,015	83,624	90,206	92,493	92,098	80,344	81,662	96,593	106,715	99,504	93,701
Coshocton	435,936	54,678	52,850	35,369	35,634	29,719	19,476	19,786	38,421	33,473	43,468	38,925	34,137
Gallia	334,664	37,575	24,615	26,631	28,841	32,146	29,023	27,467	24,975	24,489	25,596	24,010	29,296
Guernsey	467,715	54,227	55,790	49,419	43,994	39,101	39,293	34,398	31,593	29,599	37,186	29,466	23,649
Harrison	2,280,972	159,798	154,440	163,691	141,813	139,841	154,186	152,442	233,761	227,657	259,866	238,974	254,503
Holmes	123,890	18,110	18,108	18,111	13,011	13,013	13,012	15,262	15,263	0	0	0	0
Jackson	1,148,512	97,724	92,338	103,496	84,015	103,428	111,809	87,682	85,627	88,026	81,671	104,065	108,631
Jefferson	825,922	90,311	78,865	83,420	71,324	70,399	68,392	65,135	60,185	70,598	67,378	46,779	53,136
Lawrence	7,179	9	9	8	280	752	505	1,855	900	2,084	464	0	313
Mahoning	37,241	6,389	1,992	4,296	3,984	4,208	5,156	1,248	3,336	2,288	0	0	4,344
Meigs	4,629,872	515,327	475,696	422,466	275,629	378,868	298,711	339,342	365,970	440,895	469,096	322,733	325,139
Monroe	3,243,474	229,781	108,566	288,358	279,579	289,578	306,239	205,006	179,337	309,398	376,566	275,404	395,662
Morgan	1,574,663	138,930	122,110	133,354	148,983	151,131	129,562	87,850	104,630	136,220	184,665	102,820	134,408
Muskingum	690,023	37,312	42,689	48,797	55,860	48,184	40,880	56,021	66,585	64,685	68,606	71,840	88,564
Noble	736,604	79,745	69,875	69,997	58,126	71,239	54,592	56,249	58,062	50,422	50,898	55,104	62,295
Perry	1,114,029	102,256	94,125	106,687	98,104	71,109	82,506	77,932	87,270	96,708	99,862	105,618	91,852
Stark	584,517	53,325	54,585	60,796	50,016	42,861	45,898	49,941	44,186	45,213	50,883	40,921	44,892
Tuscarawas	1,167,016	113,804	116,795	96,121	98,380	90,898	79,771	92,759	86,493	98,486	96,058	95,037	102,414
Vinton	3,584,007	318,916	316,326	315,803	339,423	320,789	302,139	263,700	297,962	343,279	334,085	232,983	198,602
Washington	77,718	4,278	1,890	0	5,754	1,349	13,898	12,259	8,337	8,672	7,276	3,972	10,033
TOTAL	30,635,239	2,660,005	2,455,489	2,722,323	2,492,558	2,347,674	2,412,230	2,279,720	2,460,967	2,675,929	2,990,389	2,507,993	2,629,962

¹Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 6.—1997 Ohio coal production

County ¹	Production								
	Total	Lower Mercer (No. 3)	Upper Mercer (No. 3A)	Brookville (No. 4)	Winters	Clarion (No. 4A)	Lower Kittanning (No. 5)	Strasburg (No. 5A)	Middle Kittanning (No. 6)
Belmont	6,429,149								
Carroll	60,353						1,457		1,457
Columbiana	1,081,783			19,449			36,119		125,661
Coshocton	435,936						202,357		233,579
Gallia	334,664								314,053
Guernsey	467,715						148,863		262,547
Harrison	2,280,972								
Holmes	123,890			8,094			57,897		57,899
Jackson	1,148,512		153,808			176,028	448,027		219,088
Jefferson	825,922								
Lawrence	7,179			737		6,442			
Mahoning	37,241						37,241		
Meigs	4,629,872					4,629,872			
Monroe	3,243,474								
Morgan	1,574,663								
Muskingum	690,023								560,671
Noble	736,604								
Perry	1,114,029						326,784		557,545
Stark	584,517			158,989			51,365		374,163
Tuscarawas	1,167,016	29,352	1,795	26,022			344,139	12,342	463,705
Vinton	3,584,007	183,367	5,025	320,634	284,881	1,915,583	370,300		320,850
Washington	77,718								
TOTAL	30,635,239	212,719	160,628	533,925	284,881	6,727,925	2,024,549	12,342	3,491,218

¹Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.



A child digging for polished agates in a sand pile at the Food/Amusements area of the Hilltop Basic Resources Fairborn Plant open house. The Equipment/Vendor display is in the background.

by county and seam

(short tons)

Lower Freeport (No. 6A)	Upper Freeport (No. 7)	Mahoning (No. 7A)	Harlem	Pittsburgh (No. 8)	Pomeroy-Redstone (No. 8A)	Meigs Creek (No. 9)	Waynesburg (No. 11)	County ¹
1,457	313,163	33,517 587,391	22,465	5,364,892		918,151	146,106	Belmont Carroll Columbiana Coshocton Gallia
19,369	56,305				1,242			Guernsey Harrison Holmes Jackson Jefferson
1,578,683	130,761	477,480		264,749	54,335	383,205		Lawrence Mahoning Meigs Monroe Morgan
20,800				318,147	30,295	1,574,663		Muskingum Noble Perry Stark Tuscarawas
129,352				3,243,474		736,604		Vinton Washington
145,821	83,879					77,718		
52,571	237,090							
	183,367							
1,948,053	1,004,565	1,098,388	22,465	9,191,262	85,872	3,690,341	146,106	TOTAL

TABLE 7.—1997 Disposition of Ohio coal, by county

County ¹	Number of mines	Disposition ¹ (short tons)						Stored
		Total ²	Rail	Water	Truck	Conveyor	Unspecified/ other	
Belmont	18	6,351,560	4,095,208	506,170	1,750,182			94,133
Carroll	5	60,353	1,500		58,853			
Columbiana	11	1,088,644			752,078	336,566		1,779
Coshocton	10	433,877	10,000		423,877			2,158
Gallia	2	334,664		75,523	93,156	165,985		
Guernsey	7	465,399			465,399			2,315
Harrison	8 ³	2,143,490	533,712	140,981	1,466,090		2,707	16,486
Holmes	3	123,890			123,890			
Jackson	6	1,148,512		114,124	783,569	250,819		
Jefferson	8	828,600		148,001	680,599			1,196
Lawrence	2	7,179			7,179			
Mahoning	1	37,241			37,241			
Meigs	2	4,602,475				4,602,475		
Monroe	1	3,132,360		3,132,360				340,363
Morgan	1 ⁴	1,578,832				1,578,832		3,407
Muskingum	2	685,935			685,935			4,088
Noble	6	735,827			627,135	108,692		
Perry	7	1,115,219			1,115,219			4,143
Stark	9	584,517			584,517			
Tuscarawas	28	1,166,932	38,110		1,128,822			
Vinton	5 ³	3,585,074		108,214	1,463,316	2,013,544		
Washington	1	77,718			77,718			
TOTAL	142	30,288,298	4,678,530	4,225,373	12,324,775	9,056,913	2,707	470,068

¹Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and type(s) of disposition reported unless a by-county breakdown was provided by the operator.

²Does not reflect tonnage stored. Reflects tonnage sold and shipped from mine.

³Does not include mines extending into this county from adjoining counties.

⁴This mine extends into Morgan County from Noble County and is not included in the total number of mines.

TABLE 8.—1997 Rail shipments of Ohio coal, by county of origin and carrier

County ¹	Number of mines	Shipments (short tons)			
		Total	Conrail	Ohio Central ²	Wheeling & Lake Erie
Belmont	1	4,095,208	4,095,208		
Carroll	1	1,500		1,500	
Coshocton	1	10,000		10,000	
Harrison	1	533,712			533,712
Tuscarawas	4	38,110		38,110	
TOTAL	8	4,678,530	4,095,208	49,610	533,712

¹Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved.

²Estimated based on percentage of 1996 production disposed of via Ohio Central.

TABLE 9.—1997 Washed Ohio coal

		Raw coal (short tons)	Washed coal ¹ (short tons)	Loss in washing (short tons)	Loss in washing (percent)	Percent of all washed coals
By type of mining	From surface mines	6,290,424	5,125,593 ²	1,164,831	18.5%	24.5%
	From underground mines	26,186,803	15,803,828	10,382,975	39.7%	75.5%
	TOTAL	32,477,227	20,929,421	11,547,806	35.6%	100.0%
By seam	Upper Mercer (No. 3A)	30,644	26,226	4,418	14.4%	0.1%
	Brookville (No. 4)	16,759	14,339	2,420	14.4%	0.1%
	Winters	382,238	284,881	97,357	25.5%	1.4%
	Clarion (No. 4A)	12,951,759	6,599,788	6,351,971	49.0%	31.5%
	Lower Kittanning (No. 5)	619,013	500,028	118,985	19.2%	2.4%
	Middle Kittanning (No. 6)	1,458,454	1,288,774	169,680	11.6%	6.2%
	Lower Freeport (No. 6A)	863,058	659,520	203,538	23.6%	3.1%
	Upper Freeport (No. 7)	935,820	785,909	149,911	16.0%	3.8%
	Mahoning (No. 7A)	677,127	507,845	169,282	25.0%	2.4%
	Pittsburgh (No. 8)	12,246,970	8,451,166	3,795,804	31.0%	40.3%
	Meigs Creek (No.9)	2,141,048	1,684,352	456,696	21.3%	8.1%
	Waynesburg (No. 11)	154,337	126,593	27,744	18.0%	0.6%
	TOTAL	32,477,227	20,929,421	11,547,806	35.6%	100.0%

¹Total washed coal figures for 1997 reflect figures as reported by Ohio's coal preparation plants. These figures do not necessarily represent only 1997 production. In 1997, 30,635,239 tons of coal were produced, of which 18,600,997 tons (60.7%) were reported as washed by Ohio's mine operators. Coal not designated as washed or unwashed by Ohio's mine operators was assumed to be unwashed.

²The raw tonnage (before washing) and/or the clean tonnage (after washing) of coal was estimated for those mines which failed to report this information. These estimates were calculated using a statewide-average loss-in-washing percentage based on raw/washed coal values for type of mining and for seam deemed to be reliable.

TABLE 10.—1997 Dollar value of coal at mine by county and mining method

County ¹	Total				Underground				Surface			
	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)
Belmont	18	6,351,560	\$130,810,902	\$20.60	1	5,027,861	\$98,727,397	\$19.64	17	1,323,699	\$32,083,505	\$24.24
Carroll	5	60,353	1,188,562	19.69					5	60,353	1,188,562	19.69
Columbiana	11	1,088,644	18,896,066	17.36	3	673,336	10,635,277	15.79	8	415,308	8,260,789	19.89
Coshocton	10	433,877	11,276,644	25.99					10	433,877	11,276,644	25.99
Gallia	2	334,664	8,099,862	24.20					2	334,664	8,099,862	24.20
Guernsey	7	465,399	11,990,560	25.76					7	465,399	11,990,560	25.76
Harrison	8 ³	2,143,490	40,497,981	18.89	1	1,442,336	31,113,234	21.57	7 ³	701,154	9,384,747	13.38
Holmes	3	123,890	2,239,000	18.07					3	123,890	2,239,000	18.07
Jackson	6	1,148,512	27,896,006	24.29					6	1,148,512	27,896,006	24.29
Jefferson	8	828,600	17,820,012	21.51	2	477,480	11,666,167	24.43	6	351,120	6,153,845	17.53
Lawrence	2	7,179	99,766	13.90					2	7,179	99,766	13.90
Mahoning	1	37,241	931,025	25.00					1	37,241	931,025	25.00
Meigs	2	4,602,475	153,308,443	33.31	2	4,602,475	153,308,443	33.31				
Monroe	1	3,132,360	62,126,867	19.83	1	3,132,360	62,126,867	19.83				
Morgan	1 ⁴	1,578,832	62,016,521	39.28					1 ⁴	1,578,832	62,016,521	39.28
Muskingum	2	685,935	19,176,327	27.96					2	685,935	19,176,327	27.96
Noble	5	735,827	13,676,447	18.59					5	735,827	13,676,447	18.59
Perry	7	1,115,219	25,138,501	22.54					7	1,115,219	25,138,501	22.54
Stark	9	584,517	10,153,437	17.37					9	584,517	10,153,437	17.37
Tuscarawas	28	1,166,932	20,920,168	17.93					28	1,166,932	20,920,168	17.93
Vinton	5 ³	3,585,074	104,001,144	29.01	1 ⁵	1,775,712	59,148,967	33.31	5	1,809,362	44,852,177	24.79
Washington	1	77,718	1,165,770	15.00					1	77,718	1,165,770	15.00
TOTAL	142	30,288,298	\$743,430,011	\$24.55	10	17,131,560	\$426,726,352	\$24.91	132	13,156,738	\$316,703,659	\$24.07

¹Sales reported from mines operating in more than one county were evenly split between the counties involved unless a by-county breakdown was provided by the operator.

²The FOB value of coal sold was estimated for those mines which failed to report this information. These estimates were calculated using a countywide-average price per ton by mining method based on reported FOB values deemed to be reliable.

³Does not include mines extending into this county from adjoining counties.

⁴This mine extends into Morgan County from Noble County and is not included in the total number of mines.

⁵This mine extends into Vinton County from Meigs County and is not included in the total number of mines.

TABLE 11.—1997 Ohio coal-mine employment¹, by occupational group and month

Occupational group	Number of employees												
	Total annual	January	February	March	April	May	June	July	August	September	October	November	December
All production workers	1,957	1,937	1,915	1,925	1,959	1,928	1,917	2,003	1,976	1,973	1,971	1,971	2,006
Underground mines	1,112	1,097	1,083	1,100	1,142	1,112	1,109	1,117	1,113	1,117	1,103	1,119	1,129
Surface mines	845	840	832	825	817	816	808	886	863	856	868	852	877
Supervisory, technical, and clerical	633	618	623	617	624	629	628	638	643	628	638	643	663
Central preparation plant, central shop, etc.	514	510	511	514	519	519	516	511	520	514	512	511	515
Reclamation	110	93	89	95	112	113	121	119	101	116	121	113	109
Other ²	215	213	223	212	212	211	224	213	208	218	225	206	209
TOTAL	3,428	3,371	3,361	3,363	3,426	3,400	3,406	3,484	3,448	3,449	3,467	3,444	3,502

¹Employment was estimated for mines not reporting employment.²"Other" includes all employees who are not categorized in any other employment category, such as mobile equipment operators, mechanics, or general outside workers.TABLE 12.—1997 Ohio coal-mine production employment¹, by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	323	295	304	318	331	319	315	332	326	332	318	330	352
Carroll	6	11	13	12	6	4	3	3	5	2	4	3	2
Columbiana	78	82	65	64	109	86	87	81	78	77	69	69	70
Coshocton	30	37	37	39	23	28	19	21	29	33	37	30	27
Gallia	19	16	17	17	17	17	19	27	20	20	20	20	20
Guernsey	33	44	39	37	38	36	34	30	28	29	30	27	23
Harrison	150	115	110	123	126	129	130	177	174	177	185	179	177
Holmes	11	16	16	16	15	15	15	14	10	3	3	2	2
Jackson	85	87	86	86	87	86	87	84	84	80	79	78	97
Jefferson	94	94	97	96	97	96	96	96	95	92	92	87	94
Lawrence	5	1	1	1	4	4	8	8	5	5	5	6	6
Mahoning	4	4	4	4	4	4	4	4	4	4	0	0	4
Meigs	333	330	331	328	328	331	334	333	335	334	334	338	337
Monroe	229	242	232	231	231	231	229	230	225	225	223	223	223
Morgan	38	38	38	38	38	38	38	38	38	38	38	38	39
Muskingum	34	26	28	28	34	32	32	35	34	35	36	39	45
Noble	48	51	50	49	49	50	42	47	48	44	48	49	50
Perry	67	73	71	65	62	64	63	63	66	64	69	70	74
Stark	46	47	47	49	43	37	42	44	45	48	48	44	43
Tuscarawas	89	96	95	92	87	87	79	88	81	83	94	97	97
Vinton	231	228	230	226	224	227	230	237	238	240	231	237	219
Washington	7	4	4	6	6	7	11	11	8	8	8	5	5
TOTAL	1,957	1,937	1,915	1,925	1,959	1,928	1,917	2,003	1,976	1,973	1,971	1,971	2,006

¹Employment was estimated for mines not reporting employment.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 13.—1997 Ohio coal-mine employment¹ in central preparation plants, central shops, etc., by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	57	58	57	57	57	58	59	57	59	59	56	55	56
Columbiana	14	14	14	14	14	14	14	14	14	14	14	14	14
Coshocton	36	33	34	36	38	37	37	35	35	36	37	36	37
Gallia	5	4	5	5	5	5	5	5	5	5	5	5	5
Guernsey	1	1	1	1	1	2	1	1	1	1	1	1	1
Harrison	19	18	18	18	18	20	20	20	20	17	17	18	18
Jackson	13	13	13	13	13	13	13	13	13	13	12	12	12
Mahoning	3	5	5	5	5	2	2	2	2	2	2	2	2
Meigs	67	66	65	65	67	67	67	67	67	68	67	67	67
Monroe	58	60	60	60	60	57	57	57	57	57	56	56	57
Morgan	81	82	83	82	81	80	79	80	79	80	81	82	81
Muskingum	1	0	0	0	0	0	0	0	8	0	0	0	0
Perry	20	17	19	19	19	19	19	20	20	20	21	21	20
Scioto	23	17	17	18	21	25	25	25	25	26	26	26	26
Tuscarawas	16	19	19	19	18	18	16	14	14	13	15	15	15
Vinton	100	101	99	100	100	100	100	99	99	101	100	99	102
Wayne	2	2	2	2	2	2	2	2	2	2	2	2	2
TOTAL	514	510	511	514	519	519	516	511	520	514	512	511	515

¹Employment was estimated for mines not reporting employment.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.TABLE 14.—1997 Ohio coal-mine employment¹ in supervisory, technical, and clerical positions, by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	143	130	137	132	139	141	141	145	149	145	142	150	167
Carroll	4	5	5	5	4	4	4	3	3	3	3	3	3
Columbiana	15	14	14	14	17	15	15	15	15	15	15	15	16
Coshocton	23	25	26	26	23	24	24	21	21	22	21	20	19
Gallia	0	0	0	0	0	0	0	2	0	0	0	0	0
Guernsey	7	8	7	8	9	9	7	6	7	6	7	7	6
Harrison	15	9	9	10	11	10	9	18	20	19	22	21	21
Jackson	21	20	20	20	21	21	21	20	20	20	21	21	21
Jefferson	11	11	11	11	11	10	10	10	11	10	11	10	10
Mahoning	3	4	4	4	4	3	3	3	3	3	2	2	3
Meigs	138	138	137	138	136	139	139	138	139	137	138	138	139
Monroe	64	63	63	64	63	63	64	64	64	64	65	65	67
Morgan	46	47	47	46	46	46	46	46	46	46	46	46	46
Muskingum	8	5	6	5	7	7	8	9	13	9	9	10	11
Noble	4	5	5	5	5	5	4	4	4	4	4	4	4
Perry	7	6	7	7	7	7	7	7	7	7	7	7	7
Scioto	9	9	9	9	9	9	9	9	9	9	9	9	9
Stark	6	6	6	6	5	5	6	7	7	7	6	6	5
Tuscarawas	15	19	17	14	15	17	15	17	11	9	15	15	14
Vinton	93	93	92	92	91	93	95	93	93	92	94	93	94
Washington	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL	633	618	623	617	624	629	628	638	643	628	638	643	663

¹Employment was estimated for mines not reporting employment.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 15.—1997 Ohio surface coal-mine reclamation employment¹, by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	20	16	16	20	22	21	19	22	21	23	20	19	22
Carroll	0	0	0	0	0	0	0	0	0	1	0	0	1
Columbiana	2	2	2	2	2	2	2	2	2	2	2	2	2
Coshocton	9	14	13	14	12	12	14	6	6	4	8	8	1
Guernsey	10	9	9	8	11	9	10	9	9	8	9	8	16
Harrison	3	0	0	1	1	2	3	3	3	5	5	6	5
Jackson	2	0	0	0	3	3	3	3	3	3	3	3	3
Jefferson	8	10	8	9	10	10	11	10	6	6	7	3	1
Morgan	38	34	34	34	37	38	40	39	39	40	41	41	40
Muskingum	9	5	5	5	7	7	8	12	0	12	11	12	13
Noble	7	3	2	2	5	7	8	10	9	10	14	10	5
Stark	1	0	0	0	2	2	2	2	2	2	0	0	0
Tuscarawas	1	0	0	0	0	0	1	1	1	0	1	1	0
TOTAL	110	93	89	95	112	113	121	119	101	116	121	113	109

¹Employment was estimated for mines not reporting employment.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.TABLE 16.—1997 Ohio coal-mine employment¹ in other positions², by county and month

County ³	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	89	88	101	88	85	86	100	87	83	90	97	82	85
Carroll	2	2	2	2	2	2	2	2	2	2	3	3	3
Columbiana	12	13	10	10	13	11	12	12	12	12	12	11	13
Coshocton	1	1	1	1	1	1	1	1	0	0	1	1	1
Harrison	20	20	21	20	20	20	20	20	20	20	19	19	18
Jackson	1	1	1	1	1	1	1	1	1	1	1	1	1
Meigs	32	32	32	32	32	32	32	32	32	32	32	32	32
Morgan	8	9	8	8	8	8	8	8	8	8	8	8	8
Noble	1	1	1	1	1	1	1	1	1	1	1	0	0
Perry	1	1	1	1	1	1	1	1	1	1	1	1	1
Scioto	7	6	6	6	6	6	6	6	6	9	9	9	6
Stark	3	3	3	3	3	3	3	3	3	3	3	3	3
Tuscarawas	2	1	1	4	3	3	1	3	3	3	3	1	3
Vinton	36	35	35	35	36	36	36	36	36	36	35	35	35
TOTAL	215	213	223	212	212	211	224	213	208	218	225	206	209

¹Employment was estimated for mines not reporting employment.²Other positions² includes all employees who do not belong in any other employment category, such as mobile equipment operators, mechanics, or general outside workers.³For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 17.—1997 Wage and salary payments to Ohio coal-mine employees, by county and occupational group

County ¹	Wage and salary payments (nearest whole dollar) ²						
	All occupations	Underground production employees	Surface production employees	Central preparation plant, central shop, etc.	Supervisory, technical, and clerical	Reclamation	Other
Belmont	\$32,448,912	\$11,981,189	\$3,014,381	\$2,566,140	\$9,737,582	\$654,790	\$4,494,830
Carroll	249,816		166,692		57,271	5,691	20,162
Columbiana	4,386,173	1,715,168	1,156,924	602,989	522,302	55,951	332,839
Coshocton	4,196,951		1,239,454	1,429,322	1,218,727	296,916	12,532
Gallia	939,035		735,931	203,104			
Guernsey	2,570,518		1,593,471	36,669	435,463	504,915	
Harrison	11,603,202	5,046,088	3,344,473	936,145	1,070,807	89,178	1,116,511
Holmes	484,703		484,703				
Jackson	5,847,202		3,859,047	694,177	1,004,012	35,583	254,383
Jefferson	3,169,179	1,528,935	1,021,249		310,750	308,245	
Lawrence	65,000		65,000				
Mahoning	292,806		110,000	93,321	89,485		
Meigs	33,187,365	18,155,850		3,421,558	9,912,972		1,696,985
Monroe	19,587,225	12,570,029		2,883,825	4,133,371		
Morgan	11,018,438		1,762,570	3,709,025	3,362,400	1,801,897	382,546
Muskingum	2,401,050		1,588,312		444,890	367,848	
Noble	2,661,567		2,182,532		196,255	256,186	26,594
Perry	3,759,892		2,558,294	669,733	495,865		36,000
Scioto	2,111,000			1,280,000	423,000		408,000
Stark	1,823,417		1,402,366		264,376	22,139	134,536
Tuscarawas	5,966,034		5,132,292	447,683	312,754	7,430	65,875
Vinton	23,673,456	6,357,547	3,739,171	4,726,304	7,183,100		1,667,334
Washington	421,397		360,762		60,635		
Wayne	38,549			38,549			
TOTAL	\$172,902,887	\$57,354,806	\$35,517,624	\$23,738,544	\$41,236,017	\$4,406,769	\$10,649,127

¹For those operations reporting activity in more than one county, wage and salary payments were evenly split between the counties involved unless a by-county breakdown was provided by the operator.

²For those operations reporting only a total wage and salary payment to all workers, an equal pay rate was assumed for all employees. In cases where quarterly employment was reported but wage and salary payments were not, wage and salary payments for that quarter were estimated from reported payments in the other quarters to arrive at the annual figure. For mines reporting employment and no wage and salary payments, wage and salary payments were estimated using a countywide or statewide average.



A magician entertains guests at the Hilltop Basic Resources Fairborn Plant open house. The display tents are in the background.

INDUSTRIAL MINERALS

Industrial minerals, other than mineral fuels, were produced in a total of 86 Ohio counties in 1997. The combined value of all nonfuel industrial minerals sold in 1997 was \$688,693,320.

In 1997, 415 companies operated 660 industrial-mineral mining operations. Industrial minerals were produced or sold by 334 companies from 500 active operations. Forty-three of the 334 companies produced more than one mineral commodity from 50 operations. Eighteen of these companies produced coal and one or more industrial-mineral commodity from 24 operations. Twenty-five companies produced multiple industrial-mineral commodities (no coal) from 26 operations. The remaining 300 companies produced one industrial-mineral commodity.

Of the 39 multiple industrial-mineral operations (including those operations producing coal and more than one industrial-mineral commodity), 9 operations produced sand and gravel and clay; 8 operations produced clay and shale; 7 operations produced limestone, clay, and shale; 4 operations produced limestone and clay; 2 operations produced sandstone and sand and gravel; 2 operations produced sand

and gravel and limestone; 1 operation produced sand and gravel, clay, and peat; 1 operation produced sand and gravel and shale; 1 operation produced sandstone, clay, and shale; 1 operation produced limestone, sand and gravel, and clay; 1 operation produced sandstone and clay; 1 operation produced sand and gravel and peat; and 1 operation produced limestone and sandstone.

The 293 multiple industrial-mineral-commodity production employees worked an average of 200 days in 1997. Total wages of \$12,306,006 were paid to a total of 486 employees (293 production employees and 193 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$25,321.

The total average annual employment reported in 1997 for industrial mineral operations was 5,392 people (3,445 production employees and 1,947 nonproduction employees). Total wages for all employees at industrial mineral operations in 1997 were \$174,603,963. The average annual wage, based on those employees for whom wages were reported, was \$32,382.

TABLE 18.—1997 Value of Ohio industrial minerals

Commodity	Sales (tons)	Change from 1996 (tons/percent)	Value ¹ (dollars)	Percent of total value
Limestone and dolomite	77,536,923	+8,105,700/+11.7	\$322,398,111	46.8
Sand and gravel	57,251,127	+5,158,884/+9.9	\$244,135,841	35.5
Salt	4,227,508	-942,249/-18.2	\$67,042,235	9.7
Sandstone and conglomerate	2,531,065	+722,249/+39.9	\$38,995,076	5.7
Clay	1,485,417	-497,808/-25.1	\$8,519,917	1.2
Shale	2,857,603	+1,500,327/+110.5	\$5,193,780	0.8
Gypsum	264,154	-3,538/-1.3	\$2,377,386	0.3
Peat	17,546	+9,623/+121.5	\$80,974	<0.1
TOTAL	146,171,343	+14,053,188/+10.6	\$688,693,320	100.0

¹The FOB value of industrial minerals sold was estimated for those mines which failed to report this information and for those producing material for captive use. These estimates were calculated using a countywide- or statewide-average price per ton based on reported FOB values.



A child getting her face painted in the Food/Amusements area at the Hilltop Basic Resources Fairborn Plant open house.

TABLE 19.—1997 Employment at Ohio industrial mineral operations, by county and commodity

County ¹		Number of employees ²																Multiple commodities				
		Total employees	Total		Limestone and dolomite		Sand and gravel		Sandstone and conglomerate		Clay		Shale		Salt		Gypsum			Peat		
			Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production			Non-production	Production	Non-production
Adams	54	46	8	46	8	3	0															
Allen	39	29	10	26	10	31	7															
Ashland	38	31	7			12	3														4	
Ashtabula	23	15	7			6	11														6	
Athens	26	13	13																		2	
Auglaize	34	23	11	14	4	6	5														4	
Belmont	33	27	7	16	2	2	2														2	
Brown	15	13	2	13	2																8	
Butler	122	90	32			86	31														3	
Carroll	6	3	3			3	3														4	
Champaign	23	19	4			15	3														1	
Clark	179	53	126	4	107	49	19														3	
Clermont	18	10	8			10	8														4	
Clinton	58	29	29	29		14	14														3	
Columbiana	42	27	15																		3	
Coshocton	78	40	38	1	0	29	33	8	4	1	0										3	
Crawford	40	40	0	40	0																10	
Cuyahoga	272	167	105			6	1														1	
Darke	10	8	2	2	1																1	
Delaware	67	62	5	62	5																0	
Erie	163	103	60	90	58	3 ⁴	8	8	0												3	
Fairfield	13	8	5			8	5														0	
Fayette	14	11	3	11	3																0	
Franklin	229	184	45	74	12	100	32														10	
Fulton	3	3	0			3	0														1	
Gallia	25	14	10			5	8														2	
Geauga	97	35	62			17	3	14	57												2	
Greene	208	64	144	21	114	41	18														2	
Guernsey	9	5	4	5	4																12	
Hamilton	179	91	88			77	86														2	
Hancock	34	32	2	32	2																2	
Hardin	13	10	3	10	3																2	
Harrison	5	5	0	3	0																2	
Highland	74	41	33	41	33																12	
Hocking	26	10	16			8	16														2	
Holmes	39	28	11	9	1	14	9														2	
Huron	1	1	0																		0	
Jackson	14	11	3	5	0			1	0	0	1										5	
Jefferson	4	3	1	3	1																6	
Knox	77	49	28			19	28														1	
Lake	232	125	107			10 ⁴	21 ⁴	1	1												29	
Lawrence	7	2	6			1	6														0	
Licking	36	28	8			25	7														1	
Logan	65	37	28	28	21	9	7														0	
Lorain	14	13	1					12	1												0	

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¹For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties unless a by-county breakdown was provided by the operator.
²Employment is not included for mines which were owner operated.
³Employment information is not available.
⁴Employment for Lake Erie sand and gravel dredging operations is included in the total employment figure for the county in which the operation is based.

LIMESTONE AND DOLOMITE

Limestone and dolomite were sold or produced by 77 companies at 123 operations in 52 Ohio counties during 1997. Sales of limestone and dolomite totalled 77,536,923 tons (+11.7 percent from 1996); Ottawa, Erie, Delaware, Wyandot, and Franklin Counties accounted for 37.0 percent of those sales. Reported known production totalled 78,471,765 tons.

Lime produced from Ohio limestone and dolomite totalled 1,339,209 tons in 1997 and came from five operations in Ottawa, Sandusky, and Wyandot Counties. Ohio ranks 2nd nationally in the production of lime out of 33 producing states. The top five states, in descending order of lime production, are Missouri, Ohio, Kentucky, Alabama, and Pennsylvania. Ohio ranks 6th in the production of crushed stone (which includes crushed sandstone) out of 49 produc-

ing states. The states leading Ohio in the production of crushed stone, in descending order, are Pennsylvania, Texas, Missouri, Florida, and Illinois.⁴

The total value⁵ of limestone and dolomite sold in 1997 was \$322,348,111. Average price per ton was \$4.16.

An annual average of 1,539 employees worked an average of 225 days to produce limestone and dolomite. Total wages of \$69,305,741 were paid to a total of 2,246 employees (1,539 production employees and 707 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$30,857. An additional 207 people (87 production employees and 120 nonproduction employees) were employed by operations mining limestone and dolomite along with one or more other mineral commodities.

Primary uses for crushed and broken limestone and dolomite were road construction/resurfacing and commercial building. Other major uses for various forms of limestone and dolomite included stone for asphaltic concrete and portland cement concrete, aglime, and the production of lime.

⁴Information from U.S. Geological Survey.

⁵Includes reported and estimated values. See footnote 1, p. 5.

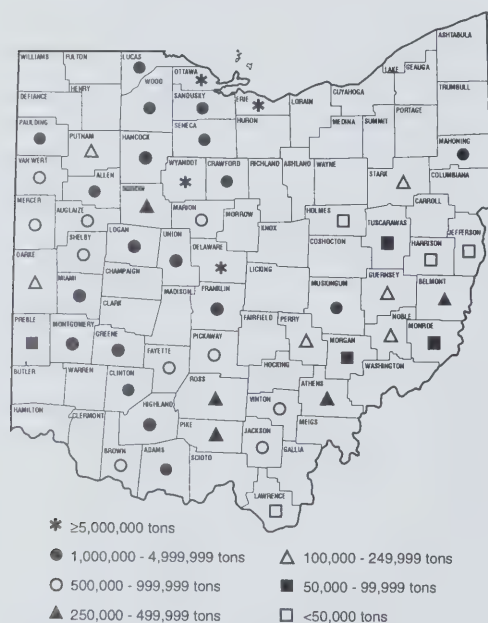


FIGURE 6.—Sales of limestone and dolomite in Ohio in 1997, by county.

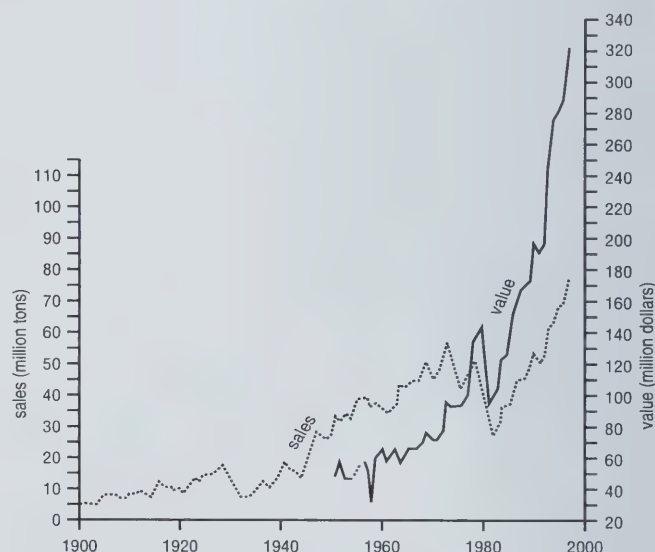


FIGURE 7.—Sales and value of limestone and dolomite in Ohio. Value line dashed where data not available.

TABLE 20.—1997 Production of lime from Ohio stone, by county and type

County	Total tons ¹	Building (tons)	Chemical and industrial (tons)	Refractory (tons)	Other (tons)
Ottawa	143,783	90,349	53,434		
Sandusky	1,066,997		1,066,997		
Wyandot	128,429		128,429		
TOTAL	1,339,209	90,349	1,248,860	0	0

¹Burning produced a 57.4 percent weight loss.

Tons sold

County	Total all types	Crushed and broken stone										Tons sold					Stone for portland cement manufac- ture	Agricultural stone (aglime)	Raw stone for burning	Un- speci- fied/ other
		Total	Riprap	Flux stone	Stone for portland cement concrete	Stone for asphaltic concrete	Road construc- tion/ resurfacing	Commercial building	Railroad ballast	Extenders/ fillers	Unspecified/ other	Dimension stone								
Adams	2,730,995	2,730,995			104,448	142,398	154,535	1,238,431	60,132		2,730,995	3,370								
Allen	1,766,323	1,757,681	3,005								54,732					5,272				
Athens	257,405	257,405									257,405					3,158				
Auglaize	851,617	848,459	10,542		15,520	217,661	604,736													
Belmont	491,620	491,620	41,315			450,305														
Brown	571,480	571,480									571,480									
Clinton	1,728,797	1,728,797									1,728,797									
Crawford	1,788,152	1,701,693	25,170	145,883												86,459				
Darke	175,033	175,033														2,561				
Delaware	5,272,079	5,269,518	51,139								458,074									
Erie	6,708,107	6,707,804	61,977		772,522	762,135														
Fayette	729,119	729,119														303				
Franklin	4,761,946	4,761,946																		
Greene	1,654,659	798,582																		
Guernsey	186,866	186,866																		
Hancock	1,679,679	1,673,250	5,542		10,000															
Hardin	299,507	290,761	2,053		28,676											6,429	8,746			
Harrison	48,788	48,788	3,942																	
Highland	2,115,726	2,084,107	8,529		27,399											31,619				
Holmes	30,917	30,917																		
Jackson	665,088	625,870																		
Jefferson	48,788	48,788	3,942													39,218				
Lawrence	10,624	10,624																		
Logan	1,155,785	1,155,785	26,717		213,506	60,610														
Lucas	3,095,440	3,095,440	188,922		406,062	138,916														
Mahoning	2,472,440	650,775																		
Marion	998,429	983,352	6,958		61,627	39,245														
Mercer	680,157	673,417	35,083		82,770	229,062										15,077	6,740			
Miami	1,429,379	1,337,175	5,637	74,538	74,715	117,532			78,374		10,000					92,204				
Monroe	89,978	89,978																		
Montgomery	1,357,131	1,232,587																		
Morgan	51,623	51,623																		
Muskingum	1,843,536	1,758,974	84,562		84,562											84,562				
Noble	174,173	174,173	947																	
Ottawa	6,914,256	6,568,331	75,639		915,707	1,016,700	3,046,968	1,407,141	2,553	33,927	69,696					845	345,080			
Paulding	1,644,443	927,842	30,585	52,490	149,200	112,478														
Perry	183,428	183,428																		
Pickaway	559,021	559,021																		
Pike	374,070	362,805	52,583		8,000	9,839														
Preble	85,465	79,410	10,099													11,265				
Putnam	249,633	249,633	426		49,875															
Ross	398,788	398,788																		
Sandusky	4,473,666	1,711,409	13,593	45,433	7,800															
Seneca	2,771,649	2,478,639			4,125	115,895										209,548	2,552,709			
Shelby	976,590	973,390														290,776				
Stark	113,815	113,815	16,566																	
Tuscarawas	93,921	93,921	17,336																	
Union	1,530,539	1,530,539																		
Van Wert	651,395	650,526	8,531		43,895	87,791										869				
Vinton	740,109	740,109			52,428	133,940														
Wood	2,844,229	2,797,852	39,862		280,438	470,505										46,377				
Wyandot	5,010,520	4,542,976	10,125	518,950	442,722	513,729										221,887	245,857			
TOTAL	77,536,923	69,695,816	841,327	837,294	3,793,078	4,078,256	28,682,181	14,406,675	909,366	543,172	15,604,467	14,859	3,475,758			1,206,844	3,143,646			
																	0			

SAND AND GRAVEL

Sand and gravel were sold or produced by 231 companies at 306 operations in 61 Ohio counties plus Lake Erie during 1997. Sales⁶ of sand and gravel totalled 57,251,127 tons (+9.9 percent from 1996). Sand accounted for 28,810,235 tons of the total sand and gravel sold, and gravel accounted for 28,440,892 tons. Hamilton, Franklin, Butler, Portage, and Stark Counties led in sales, accounting for 46.0 percent of the total. Reported known production⁶ of sand and gravel totalled 57,755,539 tons in 1997. Ohio ranks 4th nationally in the production of construction sand and gravel out of 50 producing states and Puerto Rico. The top five states, in descending order of production, are California, Michigan, Texas, Ohio, and Minnesota. Ohio ranks 9th nationally in the production of industrial sand and gravel out of 38

states. The states leading Ohio in the production of industrial sand and gravel, in descending order, are Illinois, Michigan, North Carolina, California, Wisconsin, New Jersey, Texas, and Oklahoma.⁷

A total of 152,392 tons of sand were dredged from Lake Erie in 1997. The Maumee Bay and Maumee River areas are no longer producing sand or gravel.

The total value⁸ of sand and gravel sold in 1997 was \$244,135,841. Average price per ton was \$4.26.

An annual average of 1,132 employees worked an average of 180 days in 1997 to produce sand and gravel. Total wages of \$64,559,538 were paid to a total of 1,757 employees (1,132 production employees and 625 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$36,774. An additional 75 people (63 production employees and 12 nonproduction employees) were employed by operations mining sand and gravel along with one or more other mineral commodities.

Road construction/resurfacing, building, asphaltic concrete, and portland cement concrete were the major uses for Ohio sand and gravel in 1997.

⁶Please note—Sales and production figures for sand include material dredged from Lake Erie.

⁷Information from U.S. Geological Survey.

⁸Includes reported and estimated values. See footnote 1, p. 5.

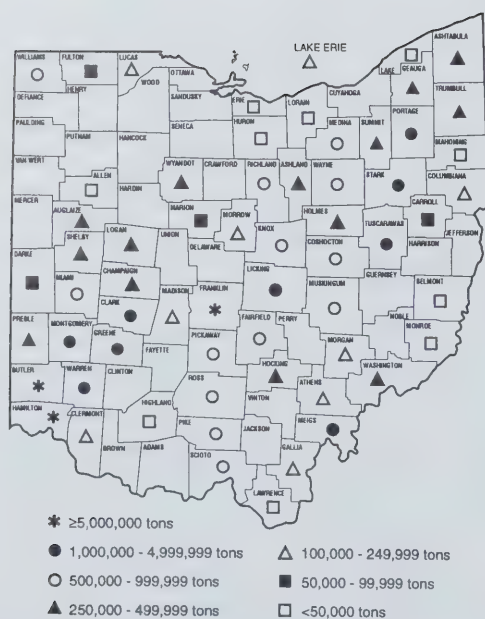


FIGURE 8.—Sales of sand and gravel in Ohio in 1997, by county.



FIGURE 9.—Sales and value of sand and gravel in Ohio. Value line dashed where data not available. Figures from 1984 to 1997 include Lake Erie dredged material.



Young open house visitors enjoying refreshments along a reclaimed lake at Hilltop Basic Resources Fairborn operation.



A crowd gathered by the display tents at the Hilltop Basic Resources Fairborn Plant open house.

Monroe	5,876	2,350	3,526	776	1,164	252,076	303,565	125,049	113,128	1,574	2,362						
Montgomery	1,509,608	580,436	929,172	42,459	100,427												
Morgan	226,478	146,428	80,050	28,536	13,158	34,050	22,937	27,924	11,968	15,640	38,927	27,994	10,313	145,212	362,812		
Morrow	167,045	42,346	124,699	33,423	87,222							8,923	7,581	15,971	6,785		
Muskingum	550,449	361,080	189,369	64,463	30,538	49,520	49,519	94,972	57,773	22,725	21,786	3,301	3,302	126,099	26,451		
Pickaway	511,970	244,147	267,823	4,163	110,198	67,683						14,370		154,171	148,698		
Pike	974,870	774,548	200,322	5,600	5,542	194,576								554,014	138,504		
Portage	4,619,211	3,235,846	1,383,365	1,147,469	796,994	507,790		482,152	191,669	20,358	33,650	3,490	22,626	1,002,783	342,333		
Preble	323,328	108,793	214,535	52,821						27,437	41,853		10,516	3,151	49		
Richland	739,424	312,989	426,435	124,395	320,649			92,945	38,865	52,821	214,486		2,950	95,435	41,149		
Ross	533,337	326,785	206,552	55,424		41,790	19,383	73,211	63,004	214	22,822		28,706	143,303	22,696		
Scioto	683,937	616,205	67,732	66,945	39,468	32,000	2,000	355,189	1,800	11,477	33,295	1,580	150,989	150,989	26,178		
Shelby	497,028	191,889	305,139		20,735	93,000	129,032	93,489	129,033	11,082	17,019		5,400	5,400	47,074		
Stark	4,470,153	2,455,092	2,015,061	31,057	129,086	455,416	116,459	361,645	611,877	908,964	679,197		7,676	698,010	478,442		
Summit	255,032	191,498	63,534	9,193	9,926	25,847		56,956	27,323	98	1,124			99,404	17,485		
Trumbull	386,781	365,158	21,623	126,925	21,455	183,836		19,154	168					35,243			
Tuscarawas	1,849,536	1,011,287	838,249	414,821	387,649	26,003	8,073	147,923	70,621	359,371	310,649		13,563	63,169	47,694		
Warren	1,702,563	715,253	987,310	76,021	164,286	35,000	70,000	35,000	72,000	268,535	415,940			300,697	265,084		
Washington	356,742	245,237	111,505	23,321	35,000	61,800		60,864	27,117	9,146	18,180			90,106	31,208		
Wayne	714,335	346,703	367,632	44,121	248,324	121,972	20,337	78,131	25,416	86,065	62,612			16,414	10,943		
Williams	516,134	382,150	133,984	20,223	40,523	320,339	41,587	20,793	8,912	20,795	8,912		17,751		34,050		
Wyandot	449,866	209,168	240,698	112,920	34,010	83,067	188,937					13,181	337,163	6,189,548			
TOTAL	57,251,127	28,810,235	28,440,892	5,460,046	8,003,280	5,301,070	2,737,574	4,139,655	3,000,841	7,339,371	10,061,962	250,858	597	129,090	4,300,072		

TABLE 23.—1997 Ohio Lake Erie sand and gravel production

Area	Production ¹	
	Cubic yards	Short tons
Lake Erie		
Fairport		135,470
Vermilion-Lorain "A"	100,348	16,922
Vermilion-Lorain "B"	12,535	0
	0	0
TOTAL	112,883	152,392

¹Production reported in cubic yards; converted to tons in the ratio of 1 cubic yard equals 1.35 short tons.

SANDSTONE AND CONGLOMERATE

Sandstone and conglomerate were sold or produced by 21 companies at 30 operations in 18 Ohio counties during 1997. Sales totalled 2,531,065 tons (+39.9 percent from 1996); Geauga, Gallia, Lorain, Perry, and Knox Counties accounted for 83.0 percent of that total. Crushed sandstone and conglomerate accounted for 2,484,104 tons of the total sales, and dimension stone accounted for 46,961 tons. Reported known production of sandstone and conglomerate was 2,914,385 tons in 1997. Ohio ranks 16th nationally in production of all dimension stone out of 34 producing states, but ranks first in the production of sandstone dimension stone. The top five states, in descending order of total dimension-stone production, are Indiana, Wisconsin, Vermont, Georgia, and Massachusetts.⁹ National stand-

ings for crushed stone are included with Limestone and Dolomite.

The total value¹⁰ of sandstone and conglomerate sold in 1997 was \$38,995,076. Average price per ton was \$14.50 for crushed stone and \$63.76 for dimension stone.

An annual average of 101 employees worked an average of 162 days in 1997 to produce sandstone and conglomerate. Total wages of \$6,458,472 were paid to a total of 182 employees (101 production employees and 81 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$35,486. An additional 32 people (26 production employees and 6 nonproduction employees) were employed by operations mining sandstone and conglomerate along with one or more other mineral commodities.

Crushed stone was used primarily for glass sand, construction, foundry sand, silica flour, and metallurgical pebble. Dimension stone was used primarily for rough construction purposes.

⁹Information from U.S. Geological Survey.

¹⁰Includes reported and estimated values. See footnote 1, p. 5.



FIGURE 10.—Sales of sandstone and conglomerate in Ohio in 1997, by county.

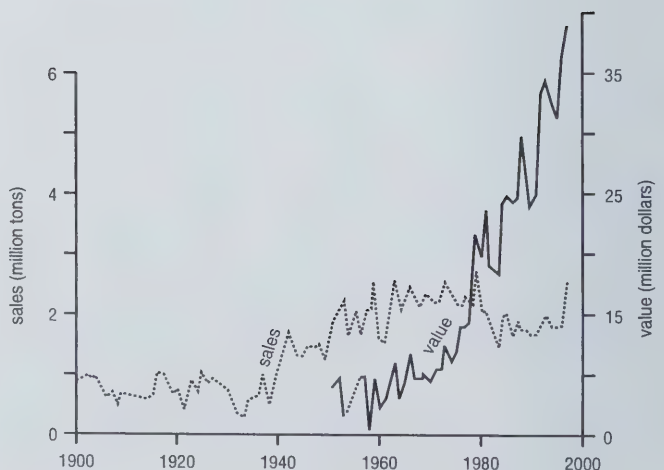


FIGURE 11.—Sales and value of sandstone and conglomerate. Value line dashed where data not available.

TABLE 24.—1997 Ohio sales of crushed sandstone and conglomerate, by county and type

County	Tons sold														
	Total	Foundry sand	Glass sand	Metallurgical pebble	Refractory	Riprap	Aggregate	Silica flour	Polishing/ grinding sand	Fire and furnace sand	Engine sand	Frac sand	Construction	Industrial sand	Other/ unspecified
Belmont	24,709					24,709									17,877
Columbiana	17,877														581,230
Erie	30						30								248,913
Gallia	581,230														
Geauga	942,115	136,522	217,436	94,155	5,000		100,000		23,756		7,357	6,274	102,702		
Huron	6,426					6,426									
Knox	177,571							52,088			6,102		28,143	16,203	
Lake	72,807		75,035				54,363						18,444		
Lorain	207,897						167,622					1,698	33,115		
Perry	188,554		58,071		8,119	40,275		87,551							
Pike	144,007	37,020	245	40,896					302				2,051		63,493
Portage	52,615												600		52,615
Scioto	600														
Summit	2,438					2,438							5,836		
Trumbull	5,836														
Tuscarawas	34,930	12,539											22,391		
Wayne	24,462												24,462		
TOTAL	2,484,104	186,081	350,787	135,051	13,119	73,848	322,015	139,639	24,058	0	13,459	7,972	937,744	16,203	964,128

TABLE 25.—1997 Ohio sales of dimension sandstone and conglomerate, by county and type

County	Tons sold									
	Total	Refractory	Rough construction	Rubble	Grindstones	Rough architectural	Finished	Curbing	Flagging	Other/ unspecified
Coshocton	26,787		26,787							
Erie	1,594		56	210			1,328			
Lorain	2,516		108	210			2,198			
Scioto	16,031		16,031			33				
Trumbull	33									
TOTAL	46,961	0	42,982	420	0	33	3,526	0	0	0

CLAY

Clay was sold or produced by 43 companies at 54 operations in 23 Ohio counties during 1997. Clay sales (including material for captive use) totalled 1,485,417 tons (-25.1 percent from 1996); Tuscarawas, Stark, Greene, Ottawa, and Paulding Counties accounted for 61.5 percent of the total sales. Ohio ranks 4th nationally in the production of clay and shale out of 42 producing states. The top five states

¹¹Information from U.S. Geological Survey.

¹²Includes reported and estimated values. See footnote 1, p. 5.

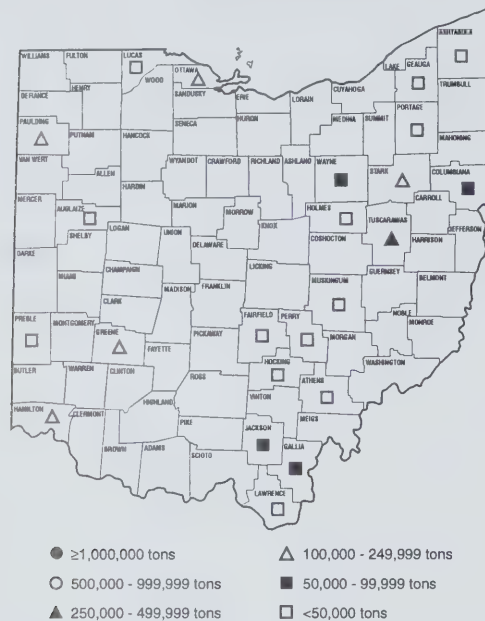


FIGURE 12.—Clay sales in Ohio in 1997, by county.

in descending order of production, are Georgia, Alabama, Wyoming, Ohio, and North Carolina.¹¹ Reported known production of clay was 1,533,677 tons. The total value¹² of clay sold (including material for captive use) in 1997 was \$8,519,917. Average price per ton was \$5.74.

An annual average of 29 employees worked an average of 120 days in 1997 mining clay. Total wages of \$779,350 were paid to a total of 47 employees (29 production employees and 18 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$16,582. An additional 266 people (137 production employees and 129 nonproduction employees) were employed by operations mining clay along with one or more other mineral commodities.

Clay mined in Ohio was largely for captive use in the landfill industry, the production of common clay products, for cement manufacture, and refractories.

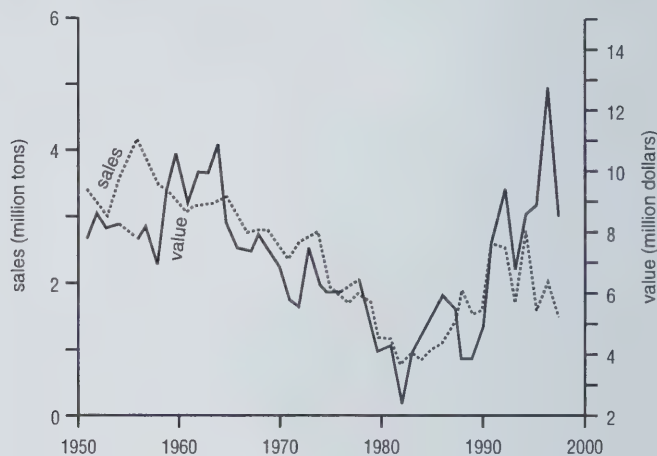


FIGURE 13.—Sales and value of clay in Ohio. Value line dashed where data not available.

TABLE 26.—1997 Ohio clay sales, by county and type

County	Tons sold								
	Total	Common clay products	Stoneware	Vitrified products	Cement manufacture	Refractories	Construction	Landfill use	Other/unspecified
Ashtabula	7,033						7,033		
Athens	6,848							108	6,740
Auglaize	7,366								7,366
Columbiana	73,773	46,530		1,829		24,906		508	
Fairfield	91								91
Gallia	75,580							75,580	
Geauga	662								662
Greene	122,127				122,127				
Hamilton	101,616							101,616	
Hocking	20,521	20,521							
Holmes	9,589	4,627							4,962
Jackson	91,200	55,778							35,422
Lawrence	6,534								6,534
Lucas	17,951	17,951							
Muskingum	17,839		8,338	9,501					
Ottawa	109,082							109,082	
Paulding	107,531				107,531				
Perry	41,024	39,774	1,250						
Portage	12,411						10,266	2,145	
Preble	2,089						2,089		
Stark	163,412	26,919		4,452				132,041	
Tuscarawas	411,374	302,244		40,229		18,822	113	46,166	3,800
Wayne	79,764	48,000					31,764		
TOTAL	1,485,417	562,344	9,588	56,011	229,658	43,728	51,265	467,246	65,577

SHALE

Shale was sold or produced by 25 companies at 36 operations in 20 Ohio counties during 1997. Shale sales (including material for captive use) totalled 2,857,603 tons (+110.5 percent from 1996); Hamilton, Stark, Tuscarawas, Cuyahoga, and Marion Counties accounted for 87.5 percent of the total sales. Reported known production of shale was 3,712,118 tons. National standings for shale production are included with Clay. The total value¹³ of shale sold (including material for captive use) in 1997 was \$5,193,780.

¹³Includes reported and estimated values. See footnote 1, p. 5.

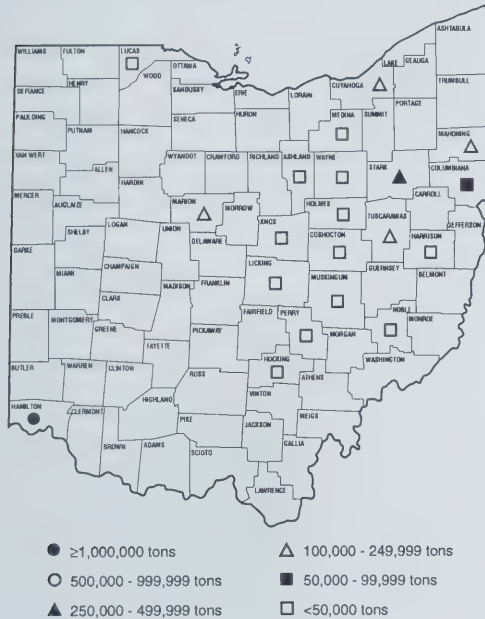


FIGURE 14.—Shale sales in Ohio in 1997, by county.

Average price per ton was \$1.82.

An annual average of 20 employees worked an average of 125 days in 1997 mining shale. Total wages of \$1,342,307 were paid to a total of 48 employees (20 production employees and 28 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$27,965. An additional 116 people (96 production employees and 20 nonproduction employees) were employed by operations mining shale along with one or more other mineral commodities.

Shale mined in Ohio was largely for captive use in the production of common clay products, for lightweight aggregate, for the landfill industry, and for cement manufacture.

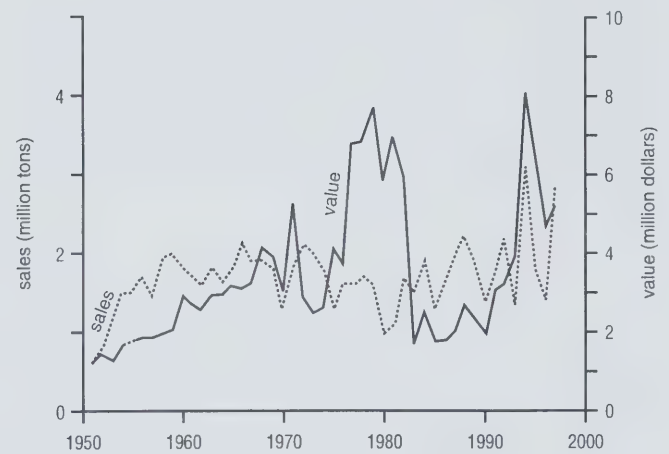


FIGURE 15.—Sales and value of shale in Ohio. Value line dashed where data not available.

TABLE 27.—1997 Ohio shale sales, by county and type

County	Tons sold							
	Total	Common clay products	Vitrified products	Cement manufacture	Lightweight aggregate	Construction	Landfill use	Other/unspecified
Ashland	530	530						
Columbiana	55,718	36,041				1,219		18,458
Coshocton	650	650						
Cuyahoga	240,080				240,080			
Hamilton	1,509,403						1,509,403	
Harrison	36,186		36,186					
Hocking	14,309	14,309						
Holmes	26,650	26,650						
Knox	873					873		
Licking	17,002		17,002					
Lucas	3,724	3,724						
Mahoning	105,988			105,988				
Marion	207,096	207,096						
Medina	17,407	17,407						
Muskingum	8,000	8,000						
Noble	165							165
Perry	39,355	39,355						
Stark	293,852		30			176	293,646	
Tuscarawas	248,741	242,498	6,060			183		
Wayne	31,874					31,874		
TOTAL	2,857,603	596,260	59,278	105,988	240,080	34,325	1,803,049	18,623

SALT

Salt was produced by 4 companies at 5 operations in 5 Ohio counties during 1997. Total tons of salt sold in 1997 amounted to 4,227,508 tons (-12.9 percent from 1996). Rock salt sales totalled 3,395,202 tons from 2 underground mines, one each in Cuyahoga and Lake Counties. Three brining operations, one each in Licking, Summit, and Wayne Counties, sold a total of 18,268 tons of salt in brine and 814,038 tons of evaporated salt. Reported known production of salt was 4,277,743 tons in 1997. Ohio ranks 3rd nationally in the production of salt out of 14 producing states. The top five states, in descending order of production, are Louisiana, Texas, Ohio, New York, and Kansas.¹⁴

The total value¹⁵ of the salt sold in 1996 was \$67,042,235. Average price per ton of rock salt was \$16.05 and of salt in brine and evaporated salt was \$15.08. The average price per ton of all salt sold was \$15.86

An annual average of 295 employees worked an average of 311 days in 1997 to produce salt. Total wages of \$19,416,226 were paid to a total of 594 employees (295 production employees and 299 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$32,687. The primary use for Ohio salt was ice control. Salt also was used as an additive in animal feed, for cattle blocks, and as a commercial and residential water-softening agent.

¹⁴Information from U.S. Geological Survey.

¹⁵Includes reported and estimated values. See footnote 1, p. 5.

¹⁶Includes estimated values only. See footnote 1, p. 5.

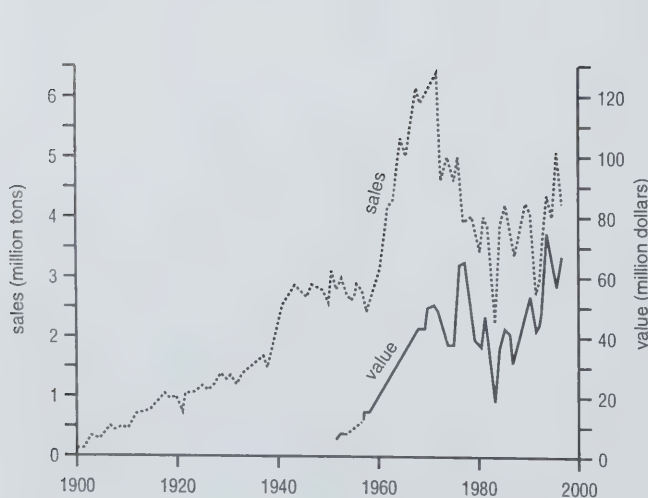


FIGURE 16.—Sales and value of salt in Ohio. Value line dashed where data not available.

GYPSUM

Gypsum was produced by 1 company at 1 operation in Ottawa County during 1997. Gypsum production and sales (all material was for captive use) totalled 264,154 tons (-1.3 percent from 1996). The reported value¹⁶ of the gypsum sold was \$2,377,386. Average price per ton was \$9.00. Ohio ranks 14th nationally in the production of gypsum out of 18 producing states. The top five states, in descending order of production, are Oklahoma, Texas, Iowa, Michigan, and Nevada.¹⁴

An annual average of 10 employees worked 271 days in 1997 producing gypsum. Total wages of \$436,323 were paid to a total of 11 employees (10 production employees and 1 nonproduction employee). The average annual wage in 1996 was \$39,665. The sole use of gypsum from this operation is for the manufacture of wallboard.

PEAT

Peat was produced by 4 companies at 4 operations in 3 Ohio counties during 1997. Peat sales (including material for captive use) totalled 17,546 tons (+121.5 percent from 1996). Champaign, Portage, and Williams Counties accounted for 100 percent of the total sales. The total value of the peat sold in 1997 was \$80,974. Average price per ton was \$4.61. Reported known production was 17,546 tons. Ohio ranks 12th nationally in the production of peat out of 20 producing states. The top five states, in descending order of production, are Florida, Michigan, Illinois, Indiana, and Iowa.¹⁴

Most peat operations in Ohio are owner operated. Therefore, employment information is not available.

Peat produced in Ohio was used primarily for mulch and soil mix.

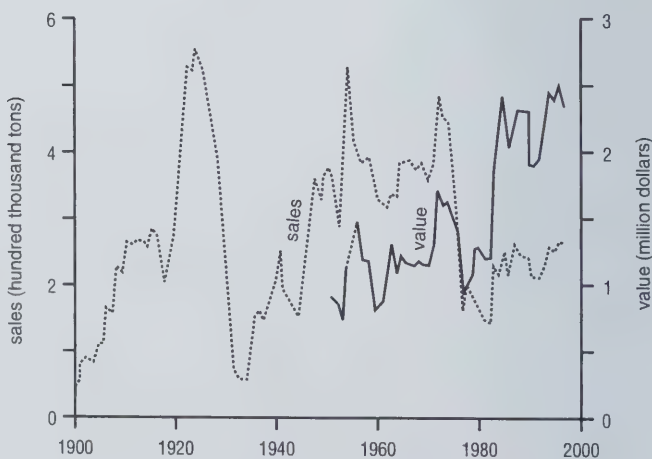


FIGURE 17.—Sales and value of gypsum in Ohio. Value line dashed where data not available. Some figures were calculated because actual figures were not reported in order to maintain confidentiality.



FIGURE 18.—Sales and value of peat in Ohio.

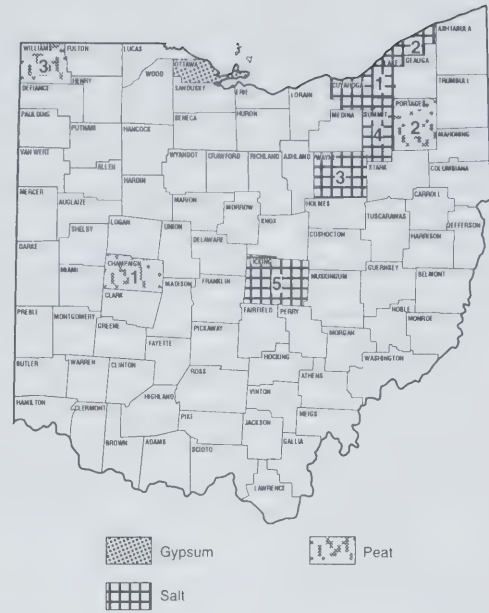


FIGURE 19.—Counties producing salt, gypsum, and peat in Ohio in 1997, and their ranking in sales.



Open house participants reviewing the many displays at the Technical/Educational exhibit at the Hilltop Basic Resources Fairborn Plant.

OIL AND GAS

This information is summarized from the 1997 Ohio Department of Natural Resources, Division of Oil and Gas Annual Report.

The Division of Oil and Gas issued 1,018 drilling permits for oil and gas in 1997 (a 10.5 percent increase from 1996); the Division estimates that 779 wells were actually drilled in 1997, an increase of 58 wells from 1996. Ohio ranks 9th nationally in the number of wells drilled.¹⁷ Wells were drilled in 39 of Ohio's 88 counties, a decrease of 7 counties from 1996. The top ten counties in number of new wells drilled in 1997 were Wayne, Portage, Muskingum, Washington, Stark, Coshocton, Mahoning, Holmes, Athens, and Pickaway. The Division of Oil and Gas received 638 well completion reports; 480 wells were productive and 158 were dry holes for a completion rate of 75.2 percent.

The total reported crude oil production in Ohio in 1997 was 8,593,359 barrels, a 3.5 percent increase from 1996. Ohio ranks 18th nationally in the volume of crude oil

produced¹⁷. Through 1997, Ohio wells have produced 1,061,793,675 barrels of crude oil. The dollar value of crude oil produced in Ohio in 1997 was \$151,887,623, a decrease of 6.5 percent. Average price per barrel in 1997 was \$17.68, a 9.6 percent decrease from the 1996 price.

Natural gas production in Ohio in 1997 was 117,408,373 MCF, a 2.5 percent decrease from 1996. This production figure includes an estimated 1,192,514 MCF of gas used on the lease. Through 1997, Ohio wells have produced 7,322,801,112 MCF of natural gas. Ohio ranks 15th nationally in the volume of natural gas produced¹⁷. The dollar value of natural gas produced in Ohio in 1997 was \$313,863,968, essentially unchanged from 1996. The value of the estimated volume of gas used on the lease was not used in computing this value. The average price per MCF in 1997 was \$2.70, an increase of 6 cents from 1996.

The combined total value of Ohio oil and gas production in 1997 was \$465,751,591 a decrease of 2.2 percent from 1996.

¹⁷Information from the Independent Petroleum Association.

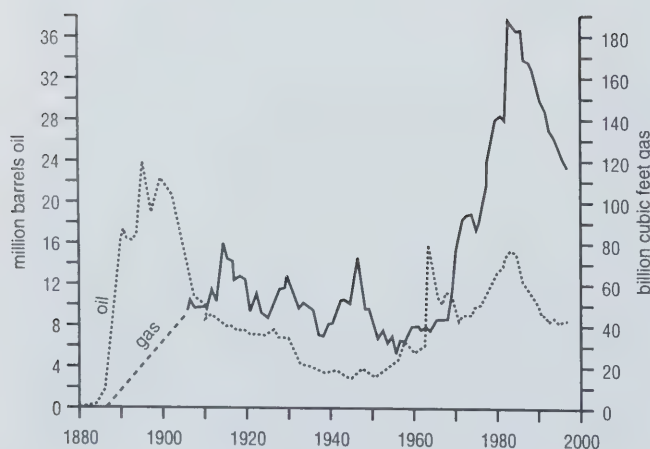


FIGURE 20.—Production of oil and gas in Ohio.

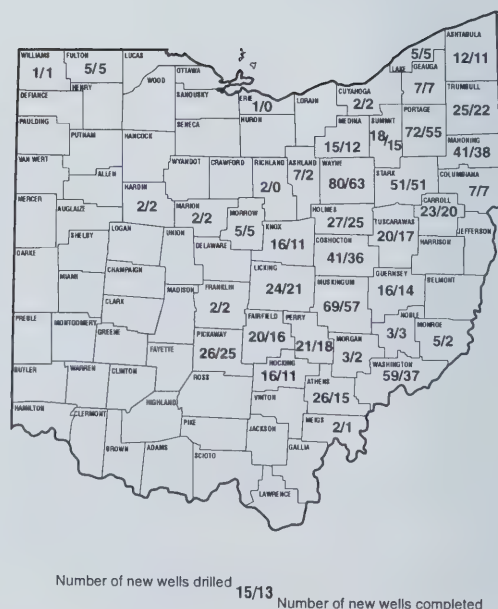


FIGURE 21.—New wells drilled for oil and gas in 1997, by county.

TABLE 28.—1997 Ohio summary of new oil and gas well completions by county

County ¹	Development wells		Exploratory wells		Total wells	Percent productive	Drilled footage		
	Productive	Dry	Productive	Dry			Productive	Dry	Total
Ashland	2	0	0	0	2	100.00	1,405	0	1,405
Ashtabula	6	0	4	1	11	90.91	41,248	6,227	47,475
Athens	12	3	0	0	15	80.00	16,515	5,025	21,540
Carroll	18	0	2	0	20	100.00	117,541	0	117,541
Columbiana	4	0	1	2	7	71.43	25,584	17,111	42,695
Coshocton	29	2	2	3	36	86.11	128,553	20,606	149,159
Cuyahoga	0	0	2	0	2	100.00	7,276	0	7,276
Fairfield	4	4	5	3	16	56.25	37,945	28,127	66,072
Franklin	0	0	1	1	2	50.00	2,825	2,985	5,810
Fulton	5	0	0	0	5	100.00	2,493	0	2,493
Geauga	5	0	0	2	7	71.43	20,012	10,190	30,202
Guernsey	9	0	4	1	14	92.86	73,604	7,357	80,961
Hardin	0	0	0	2	2	0.00	0	4,921	4,921
Hocking	2	3	5	1	11	63.64	28,860	17,700	46,560
Holmes	11	8	2	4	25	52.00	66,675	77,238	143,913
Knox	6	0	1	4	11	63.64	23,600	18,930	42,530
Lake	4	0	0	1	5	80.00	13,036	5,825	18,861
Licking	9	3	5	4	21	66.67	50,522	22,369	72,891
Mahoning	35	0	1	2	38	94.74	200,237	16,885	217,122
Marion	0	0	0	2	2	0.00	0	4,699	4,699
Medina	6	1	1	4	12	58.33	27,334	29,842	57,176
Meigs	0	0	1	0	1	100.00	5,920	0	5,920
Monroe	2	0	0	0	2	100.00	4,275	0	4,275
Morgan	1	0	0	1	2	50.00	5,160	386	5,546
Morrow	0	4	0	1	5	0.00	0	18,296	18,296
Muskingum	39	8	3	7	57	73.68	194,786	90,959	285,745
Noble	2	0	1	0	3	100.00	11,988	0	11,988
Perry	6	3	3	6	18	50.00	45,612	42,838	88,450
Pickaway	4	5	3	13	25	28.00	17,385	47,258	64,643
Portage	49	3	3	0	55	94.55	355,449	22,653	378,102
Stark	45	3	2	1	51	92.16	265,331	28,234	293,565
Summit	15	0	0	0	15	100.00	64,882	0	64,882
Trumbull	21	0	0	1	22	95.45	104,036	7,432	111,468
Tuscarawas	11	1	4	1	17	88.24	90,333	16,223	106,556
Washington	25	9	2	1	37	72.97	53,850	14,578	68,428
Wayne	32	18	2	11	63	53.97	178,025	159,903	337,928
Williams	0	0	1	0	1	100.00	442	0	442
TOTAL	419	78	61	80	638	75.24	2,282,739	744,797	3,027,536

¹No wells were drilled in the following counties in 1997: Adams, Allen, Auglaize, Belmont, Brown, Butler, Champaign, Clark, Clermont, Clinton, Crawford, Darke, Defiance, Delaware, Fayette, Gallia, Greene, Hamilton, Hancock, Harrison, Henry, Highland, Huron, Jackson, Jefferson, Lawrence, Logan, Lorain, Lucas, Madison, Mercer, Miami, Montgomery, Ottawa, Paulding, Pike, Preble, Putnam, Ross, Sandusky, Scioto, Seneca, Shelby, Union, Van Wert, Vinton, Warren, Wood, and Wyandot. Wells were drilled but not completed in Erie and Richland Counties.

TABLE 29.—1997 Ohio summary of new oil and gas well completions by producing zone

Producing zone	No. of producing wells	No. of dry holes	Total no. of wells	Percent productive	Total footage
Pennsylvanian undifferentiated	2	5	7	28.57	6,961
Upper Mississippian undifferentiated	22	7	29	75.86	34,410
Lower Mississippian "1st & 2nd Berea"	16	2	18	88.89	23,600
Devonian					
Ohio Shale	14	2	16	87.50	29,162
Oriskany	9	3	12	75.00	40,909
Silurian					
Salina-"Newburg"	2	1	3	66.67	9,062
"Clinton-Medina"	240	2	242	99.17	1,125,493
Lower Ordovician					
Black River-St. Peter	2	0	2	100.00	12,448
Beekmantown	21	8	29	72.41	204,049
Cambrian-Ordovician					
Rose Run	119	70	189	62.96	1,079,217
Cambrian					
Trempealeau	33	56	89	37.08	452,901
Mt. Simon	0	1	1	0.00	2,928
Precambrian	0	1	1	0.00	6,396
TOTAL	480	158	638	75.24	3,027,536

TABLE 30.—Ohio counties¹ and their state mine number abbreviations²

County	Abbreviation	County	Abbreviation	County	Abbreviation
Adams	Ads	Hamilton	Hmn	Noble	Ne
Allen	An	Hancock	Hk	Ottawa	Oa
Ashland	Ald	Hardin	Hdn	Paulding	Pg
Ashtabula	Asa	Harrison	Hn	Perry	Py
Athens	As	Henry	Hy	Pickaway	Pky
Auglaize	Ae	Highland	Hd	Pike	Pke
Belmont	Bt	Hocking	Hg	Portage	Pe
Brown	Bn	Holmes	Hs	Preble	Pre
Butler	Br	Huron	Hrn	Putnam	Pm
Carroll	Cl	Jackson	Jkn	Richland	Rd
Champaign	Cpn	Jefferson	Jfn	Ross	Rs
Clark	Ck	Knox	Kx	Sandusky	Sy
Clermont	Ct	Lake	Lke	Scioto	So
Clinton	Cln	Lawrence	Le	Seneca	Sa
Columbiana	Ca	Licking	Lg	Shelby	Shy
Coshocton	Cn	Logan	Lgn	Stark	Sk
Crawford	Cd	Lorain	Ln	Summit	St
Cuyahoga	Cya	Lucas	Ls	Trumbull	Tl
Darke	Dke	Madison	Mdn	Tuscarawas	Ts
Defiance	De	Mahoning	Mg	Union	Un
Delaware	Del	Marion	Mn	Van Wert	Vt
Erie	Ee	Medina	Ma	Vinton	Vn
Fairfield	Fd	Meigs	Ms	Warren	Wan
Fayette	Fe	Mercer	Mr	Washington	Wn
Franklin	Fn	Miami	Mi	Wayne	We
Fulton	Ftn	Monroe	Me	Williams	Ws
Gallia	Ga	Montgomery	My	Wood	Wd
Geauga	Gea	Morgan	Mon	Wyandot	Wt
Greene	Ge	Morrow	Mw		
Guernsey	Gy	Muskingum	Mum		

¹Defiance and Henry Counties reported no production or sales of mineral commodities in 1997.²As used for State mine numbers.

1997 COAL COMPANIES WITH SALES OR PRODUCTION

Company	Number of mines	Production (tons)	Sales (tons)
American Landfill, Inc.	1	29,320	29,320
Anthony Mining Co., Inc.	1	143,545	143,545
Avis Coal Co.	1	147,632	147,632
B & N Coal, Inc.	6	704,853	704,853
BRYCO	1	56,909	56,909
Belden Brick Co.	3	11,910	11,910
Belville Mining Co., Inc.	2	7,179	7,179
Black Gold Recovery, Inc.	1	3,117	3,117
Blue Jay Enterprises of Tls. Co., Inc.	2	5,232	5,232
Buckeye Industrial Mining Co.	9	1,098,901	1,098,901
Buckingham Coal Co., Inc.	5	312,829	314,019
C & E Coal, Inc.	2	119,510	119,369
Cedar Heights Clay Co.	1	4,091	4,091
Central Ohio Coal Co.	1	1,684,132	1,687,524
Commercial Minerals, Inc.	3	53,630	53,630
Consolidation Coal Co.	1	383,205	383,205
Cravat Coal Co.	4	293,450	294,993
D. & D. Mining Co.	1	55,568	62,570
Daron Coal Co., Inc.	3	208,744	208,744
ENZ, Inc.	2	158,989	158,989
ESSROC Cement Corp.	1	37,241	37,241
R. A. Eberts Co., Inc.	2	156,786	156,786
F & M. Coal Co.	2	18,402	18,402
Harrison Mining Corp.	1	1,578,683	1,442,336
Holmes Limestone Co.	11	617,607	617,607
K.C.C.I.	1	2,332	2,332
Kimble Clay & Limestone Co.	5	345,923	345,839
L & M Mineral Co.	3	36,198	36,198
Red Malcuit, Inc.	1	88,174	88,174
Marietta Coal Co.	10	506,171	506,171
Miller Mining, Inc.	6	256,858	256,858
Myers Mining	2	22,205	22,205
Northshore Coal, Inc.	3	44,350	44,350
Ohio Valley Coal Co.	1	5,101,747	5,027,861
Oxford Mining Co., Inc.	4	896,514	896,514
Quarto Mining Co.	1	3,243,474	3,132,360
R & F Coal Co.	10	1,559,395	1,547,230
R & R Minerals, Inc.	1	17,950	17,950
Sands Hill Coal Co., Inc.	6	1,315,002	1,315,002
Melvin Schaney	1	4,573	4,573
Schiappa Coal Co., Inc.	1	168,560	168,560
Southern Ohio Coal Co.	2	6,404,517	6,378,187
Sterling Mining Co.	2	477,480	477,480
Sunnydale Mining Co.	1	9,033	9,033
Triple A Construction	1	260	260
VFL Technologies	1	1,242	1,242
Valley Mining, Inc.	5	352,860	352,859
Varkony Mining Co.	1	53,767	53,767
Waste Management of Ohio, Inc.	1	3,215	3,215
Waterloo Coal Co., Inc.	3	1,815,417	1,815,417
Frank Widmor Coal Co., Inc.	1	14,805	14,805
Zoar Mining Co.	1	1,752	1,752
TOTAL: 52 companies	142	30,635,239	30,288,298

1997 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS

For those mines that have not been assigned a state mine number, a letter designation is used (example: Bt-C).

The designation (u) following the map-location number indicates an underground mine.

To convert short tons to metric tons, multiply the given tonnage by 0.907185.

Name, address, telephone number, and president/ owner/manager of company	Name of mine (and map location number)	County	1997 production (tons)	State mine number	Mining and reclamation permit number
American Landfill, Inc. 7916 Chapel St. SE Waynesburg, OH 44688 330-856-8800 Stephen Kilper, pres.	American Landfill, Inc. (631)	Stark	29,320	Sk-246	D-1090
Anthony Mining Co., Inc. P.O. Box 1298 Steubenville, OH 43952 740-765-4185 Albert Carapellotti, pres.	Omaits (756)	Jefferson	143,545	Jfn-835	D-1063
Avis Coal Co. P.O. Box 31 Shawnee, OH 43782-0031 740-394-2644 James F. Graham, pres.	Congo (663)	Perry	147,632	Py-A	D-0931
B & N Coal, Inc. P.O. Box 100 Dexter City, OH 45727 740-783-3575 Carl Baker, Jr., pres.	Ullman Pit (514) Lee Pit (627) Estadt Pit (760) Flint Pit (761) Barnes Ridge Pit (799) Shilling Pit (493)	Noble Noble Noble Noble Noble Washington	99,469 68,805 83,049 10,567 365,245 77,718	Ne-151 Ne-155 Ne-BN Ne-BN1 Ne-BN2 Ne-1008	D-0807 D-0958 D-1038 D-1032 D-1122 D-0706
BRYCO P.O. Box 870 Coshocton, OH 43812 740-623-0660 Paul Bryant, pres.	BRYCO (819)	Coshocton	56,909	Cn-B	D-1142
Belden Brick Co. P.O. Box 20910 Canton, OH 44701 330-852-2424 William H. Belden, Jr., pres.	Moomaw Pit (667) Wallick Pit (720) Shanesville Pit (634)	Tuscarawas Tuscarawas Tuscarawas	2,165 8,731 1,014	Ts-1517 Ts-1841 Ts-1939	IM-46 IM-45 IM-47
Belville Mining Co., Inc. P.O. Box 834 Ironton, OH 45638 740-643-2331 Thomas J. Belville, pres.	Brady Creek (491) Davis Pit (759)	Lawrence Lawrence	737 6,442	Le-B Le-BM	IM-1188, D-0746 D-1057, D-1073
Black Gold Recovery, Inc. 53557 Mud Run Rd. Senecaville, OH 43780 740-838-6555 Tim Hall, pres.	Black Gold Recovery, Inc. (808)	Belmont	3,117	Bt-BG	D-1102
Blue Jay Enterprises of Ts. Co., Inc. P.O. Box 641 Zoar, OH 44697 330-874-2048 Leland Ervin, pres.	Swonger-Waltz Mine (783) Blue Jay #1 (828)	Tuscarawas Tuscarawas	1,350 3,882	Ts-520 Ts-BJ	IM-214 IM-1285
Buckeye Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 330-337-9511 John C. Grisham, pres.	R & T (769) Mountain Spring #15 (529) (u) West Point (647) (u) Mountain Spring #11 (790) (u) Benner (817) Taylor (818) Clapper (632) Close (802) Robertsville (718)	Carroll Columbiana Columbiana Columbiana Columbiana Columbiana Stark Stark Stark	33,517 91,430 336,770 245,136 1,078 178,661 46,012 4,759 161,538	Cl-BIM Ca-349 Ca-987 Ca-1003 Ca-BI1 Ca-BI2 Sk-247 Sk-B Sk-BI	D-1107 D-0928 D-0928 D-0928 D-1154 D-1140 D-0929 D-1123 D-1043
Buckingham Coal Co., Inc. P.O. Box 31 Shawnee, OH 43782-0031 740-394-2644 James F. Graham, pres.	Thompson Mine (497) Rogers Hollow (629) Bolyard Mine (801) Pine Run (762) Imler (763)	Perry Perry Perry Perry Perry	63,047 10,754 93,672 125,103 20,253	Py-340 Py-B Py-BC1 Py-BM1 Py-BM2	D-0916 D-0940 D-1126 D-1089 D-1093
C & E Coal, Inc. P.O. Box 333 Lisbon, OH 44432 330-424-3739 Amos L. Rawson, pres.	Amato (646) Ferris (789)	Columbiana Columbiana	82,262 37,248	Ca-986 Ca-CE	D-1111 D-1127

1997 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/ owner/manager of company	Name of mine (and map location number)	County	1997 production (tons)	State mine number	Mining and reclamation permit number
Cedar Heights Clay Co. 50 Portsmouth Rd. P.O. Box 295 Oak Hill, OH 45656-0295 740-682-7794 W. T. Tredennick, pres.	Harrison (797)	Jackson	4,091	Jkn-CH2	IM-1302
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 740-454-1121 Gary Dimmerling, gen.mgr	Muskingum Mine (228)	Morgan, Noble	1,684,132	Ne-41	D-1034, D-1084
Commercial Minerals, Inc. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 330-549-2165 W. T. Mackall, pres.	Buckeye Rd. (736) Ketchum North (737) Ketchum West (688)	Columbiana Columbiana Columbiana	35,079 16,091 2,460	Ca-997 Ca-998 Ca-CM1	D-1051 D-1068 D-0950
Consolidation Coal Co. 1800 Washington Rd Pittsburgh, PA 15241-1421 412-831-4000 J. Brett Harvey, pres.	Mahoning Valley Mine (150)	Harrison	383,205	Hn-700	D-51, D-54, D-334, D-414, D-452, D-784, D-826
Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 740-942-4656 Michael Puskarich, pres.	Stratton Pit (809) Oak Park Pit (776) Knight Pit (824) Salt Run (757)	Belmont Harrison Harrison Jefferson	27,722 38,003 43,982 183,743	Bt-CC1 Hn-C Hn-N Jfn-JC	D-1150 D-1098 D-1143 D-1067
D. & D. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 330-549-3127 Donald Thompson, pres.	D. & D. Strip (441)	Columbiana	55,568	Ca-348	D-1002
Daron Coal Co., Inc. 3296 Pleasant Valley Rd. SE Dennison, OH 44621 740-922-6829 Ronald Selway, pres.	Pleasant Valley Mine (433) Reed Mine (671) Peach Pit (766)	Tuscarawas Tuscarawas Tuscarawas	49,588 107,192 51,964	Ts-1991 Ts-DC Ts-DCC	D-0702 D-0954-1 D-1075
ENZ, Inc. P.O. Box 405 Magnolia, OH 44643 330-866-4510 James R. Demuth, pres.	Fox Pit (831) Sickafoose Pit (246)	Stark Stark	35,241 123,748	Sk-205 Sk-208	D-1144 D-1015
ESSROC Cement Corp. P.O. Box 779 Bessemer, PA 16112 724-667-7702 Robert Rayner, pres. & CEO	Carbon Pit (827)	Mahoning	37,241	Mg-EM	IM-1056
R. A. Eberts Co., Inc. P.O. Box 109 Jackson, OH 45640 740-682-7787 Phil A. Bowman, pres.	Dark Hollow (652) Green Pit (418)	Jackson Vinton	153,808 2,978	Jkn-1070 Vn-182	D-0997, D-1115 D-0631
F. & M. Coal Co. Costonia Rd. Box 171 Toronto, OH 43964 740-544-5203 Edward Fiala, partner	F. & M. Coal Co. (186) F. & M. Coal Co. (826)	Jefferson Jefferson	15,591 2,811	Jfn-784 Jfn-FM	D-0728 D-1147
Harrison Mining Corp. P.O. Box 176 Cadiz, OH 43907 740-942-8220 John A. McNab, pres.	Nelms Mine-Cadiz Portal (580) (u)	Harrison	1,578,683	Hn-710	D-0426
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 330-893-2721 Merle Mullet, pres.	Miley (740) Byesville (745) 241 Plant (161) 557 (777) Charm-Berlin (753)	Coshocton Guernsey Holmes Holmes Holmes	23,484 57,117 8,094 33,397 82,399	Cn-H1 Gy-327 Hs-67 Hs-HL Hs-HLC1	D-1094 D-1088 IM-3, IM-768 D-1109 D-1092

1997 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/ owner/manager of company	Name of mine (and map location number)	County	1997 production (tons)	State mine number	Mining and reclamation permit number
Holmes Limestone Co. (cont.)	Bolivar Mine (363) East Canton (779) Stone Creek (601) Reynolds (670) Dutch Valley (829) Dennison (674)	Stark Stark Tuscarawas Tuscarawas Tuscarawas Tuscarawas	47,494 133,190 149,686 4,443 19,313 58,990	Sk-235 Sk-HCC Ts-2023 Ts-2045 Ts-H3 Ts-HLC	D-0865 D-1106 D-0796 D-1001 D-1146 D-0969
K.C.C.I. P.O. Box 24 Morristown, OH 43759 740-543-4389 George Krulock, pres.	Apex (796)	Harrison, Jefferson	2,332	Jfn-K	IM-1164
Kimble Clay & Limestone Co. 3596 State Route 39 W Dover, OH 44622-9801 330-343-1226 Floyd E. Kimble, owner	Kimble Clay & Limestone (262) Kimble Clay & Limestone (598) Kimble Clay & Limestone (784) Kimble Clay & Limestone (830) Kimble Clay & Limestone (640)	Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas	13,717 244,887 34,165 35,237 17,917	Ts-1727 Ts-2019 Ts-K4 Ts-K5 Ts-RM	IM-9 D-0852 D-1079 D-1133 D-0904
L & M Mineral Co. 5205 State Route 39 Millersburg, OH 44654 330-893-2227 John E. Ling, Jr., pres.	Evans, et al. (264) Luikert (267) Hicks, Panzer (807)	Tuscarawas Tuscarawas Tuscarawas	4,106 8,436 23,656	Ts-1884 Ts-1914 Ts-2041	IM-6 D-0701 D-1116
Red Malcuit, Inc. 707 South Wooster Ave. P.O. Box 166 Strasburg, OH 44680-0166 330-878-7114 Mark A. Malcuit, pres.	RMI #2 (510)	Tuscarawas	88,174	Ts-2007	D-0737
Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 740-695-2197 George Nicolozakes, pres.	Baltimore Coal - Presutti (424) North American- Thronton (450) Hostetler-Hapapuro (810) Spragg (788) AT&T (604) Dyrdek-Poe, et al. (730) Daley-Pickenpaugh (811) Johnson-Wozniak, et al. (812) Taylor-Hamilton, et al. (813) Brown, et al (814)	Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont	27,082 80,916 8,594 75,857 140,503 53,332 29,782 27,827 50,752 11,526	Bt-1150 Bt-1162 Bt-1171 Bt-1172 Bt-AT Bt-M2 Bt-M3 Bt-M4 Bt-M5 Bt-M6	D-0478, D-0597 D-0720 D-0674 D-0753 D-0922 D-1029 D-1134 D-1135 D-1138 D-1152
Miller Mining, Inc. ¹ P.O. Box 525 Sugarcreek, OH 44681-0525 330-852-4511 Olen Miller, pres.	Geiger-Carroll Mine (734) Snyder (780) Wilmar Farms-Marino (725) Mushrush (803) Ragersville-Putt (768) Alpine Hills (805)	Carroll Coshocton Tuscarawas Tuscarawas Tuscarawas Tuscarawas	4,371 64,401 3,590 87,623 7,502 89,371	Cl-514 Cn-TS Ts-2039 Ts-AL Ts-MM3 Ts-MM5	D-1081 D-1110 D-1023-1 D-1121 D-1085 D-1130
Myers Mining P.O. Box 218 Carrollton, OH 44615 330-739-2009 Benjamin A. Erb, owner	Harlem Mine #4 (686) Harlem Mine #5 (815)	Carroll Carroll	5,930 16,275	Cl-HM1 Cl-M	D-1035 D-1145
Northshore Coal, Inc. 100 W. Main St. St. Clairsville, OH 43950 740-695-7237 Charles F. Dawson, pres.	Uniontown (683) Buckeyeville (648) Jacobs (792)	Belmont Guernsey Guernsey	34,133 3,451 6,766	Bt-B Gy-315 Gy-N	D-0998 D-0951 D-1118
Ohio Valley Coal Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Powhatan #6 (3) (u)	Belmont	5,101,747	Bt-68	D-0360
Oxford Mining Co., Inc. 1811 Cambridge Rd. P.O. Box 427 Coshocton, OH 43812 740-622-6302 Charles C. Ungurean, pres.	Coshocton Landfill (772) Claysville (823) Adamsville (716) Z-Mack (764)	Coshocton Guernsey Muskingum Perry	9,132 46,088 187,726 653,568	Cn-OM Gy-OM Mum-O Py-O	D-1104 D-1040 D-1030 D-1086

¹Miller Mining, Inc., operations transferred to Copperhead Coal Co. in 1998.

1997 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/ owner/manager of company	Name of mine (and map location number)	County	1997 production (tons)	State mine number	Mining and reclamation permit number
Quarto Mining Co. (subsidiary of Consolidation Coal Co.) 1800 Washington Rd. Pittsburgh, PA 15241-1421 412-831-4367 Ben Statler, sr. v. pres., mining	Powhatan #4 (215) (u)	Monroe	3,243,474	Me-4	D-0433
R & F Coal Co. 538 North Main St. Cadiz, OH 43950 740-942-2186 D. Michael Jamison, pres.	Bethesda Pit (456) Egypt Valley West (731) Oxford-Rettos (741) Broken Aro/Broken Aro Remine (742) Ishmael (791) Carey-Levering (820) Marsh Lumber (821) Wynn-Fausnight (793) Mesa-Miller (773) Adamsville (798)	Belmont Belmont Coshocton Coshocton Coshocton Coshocton Coshocton Guernsey Guernsey Muskingum	53,521 454,960 112,160 93,335 2,842 38,233 17,490 227,960 56,597 502,297	Bt-1168 Bt-RF2 Cn-OX1 Cn-RF3 Cn-RF4 Cn-RF5 Cn-RF6 Gy-307 Gy-317 Mum-RF	D-0619 D-1062 D-1064, D-1113 D-1071 D-1119 D-1129 D-1071-1 D-0608 D-1011 D-1131
R & R Minerals, Inc. 7360 Skyview Rd. Millersburg, OH 44654 330-674-4926 Gary R. Ross, pres.	Fresno-McCleary (695)	Coshocton	17,950	Cn-841	D-1033
Sands Hill Coal Co., Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Alan C. Arthur, pres.	Coal Valley (787) Sands Hill Strip (653) Lincoln (825) Milton (778) Elk (675) Sands Hill Strip #3 (513)	Gallia Jackson Jackson Jackson Vinton Vinton	333,422 16,536 153,618 333,679 103,570 374,177	Ga-629 Jkn-1071 Jkn-S3 Jkn-SHCC Vn-194 Vn-S	D-1095 D-1003 D-1137 D-1108 D-0973 D-0793
Melvin Schaney 47134 Giacobbi Rd. Jewett, OH 43986 740-937-2515 Melvin Schaney, owner	Schaney Pit (748)	Harrison	4,573	Hn-759	D-1037
Schiappa Coal Co., Inc. State Route 43 Canton Rd. P.O. Box 728 Steubenville, OH 43952 740-282-5301 Teresa C. Schiappa, pres.	Cherry Valley (795)	Harrison	168,560	Hn-767	D-1124
Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 740-669-2801 Lance Sogan, gen. mgr.	Meigs Mine #31 (212), (300) (u) Meigs Mine #2 (213) (u)	Meigs, Vinton Meigs	3,549,291 2,855,226	Ms-293 Ms-294	D-0354, D-0463 D-0355
Sterling Mining Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452 330-549-2165 W. T. Mackall, pres.	Sterling North (657) (u) Sterling South (758) (u)	Jefferson Jefferson	255,593 221,887	Jfn-823 Jfn-ST	D-0949 D-1019
Sunnydale Mining 88740 Fairview Rd. Jewett, OH 43986 740-946-4291 Robert Stewart, owner	Dodds (749)	Harrison	9,033	Hn-761	D-1082, D-1097
Triple A Construction 60997 Ridgeview Dr. Barnesville, OH 43713 740-782-1595 Bradley A. Allar, pres.	Regal Mining Project (816)	Carroll	260	Cl-T	D-1141
VFL Technologies Corp. 16 Haggerty Blvd. West Chester, PA 19382-7594 610-918-1100 Richard Patton, pres.	Gavin Plant Landfill (822)	Gallia	1,242	Ga-VFL	IM-1314
Valley Mining, Inc. 4412 Pleasant Valley Rd. SE Dennison, OH 44621 740-922-3942 Mary J. Brown, pres.	Egypt Valley (732) Snyder-Bush (696) Piergallini (709) Crim (555) Elliot-Smith (806)	Belmont Guernsey Jefferson Tuscarawas Tuscarawas	232,974 69,736 1,586 8,450 40,115	Bt-VM Gy-318 Jfn-831 Ts-2005 Ts-VM	D-1059 D-1025 D-1026 D-0769 D-1125

1997 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/ owner/manager of company	Name of mine (and map location number)	County	1997 production (tons)	State mine number	Mining and reclamation permit number
Varkony Mining Co. P.O. Box 427 Hopedale, OH 43976 740-937-2777 Stephen Varkony, pres.	Tony Pit (146)	Harrison	53,767	Hn-217	D-0440
Waste Management of Ohio, Inc. 3619 Gracemont St. SW East Sparta, OH 44626 330-874-3855 Greg A. Terwilliger, site manager	Countywide RDF (248)	Stark	3,215	Sk-217	D-0938
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 Phil A. Bowman, v. pres.	Bowman Strip (165) Allied Pit (420) Dundas (602)	Jackson Vinton Vinton	486,780 411,802 916,835	Jkn-367 Vn-184 Vn-191	D-0594, D-968, D-1083 D-0609 D-0867, D-0957, D-1004
Frank Widmor Coal Co., Inc. P.O. Box 176 Blaine, OH 43909 740-676-2224 Jay Van Dyne, pres.	Frank Widmor Coal Co., Inc. (603)	Belmont	14,805	Bt-1190	IM-1089, D-1061
Zoar Mining Co. P.O. Box 550 Zoar, OH 44697 330-223-1511 David W. Johnson, pres.	Zoar Mining Co. (258)	Tuscarawas	1,752	Ts-540	IM-28



Hilltop Basic Resources Fairborn operation. The plant consumes 500 tons/hr of pit run material.

1997 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND ASSOCIATED FACILITIES, BY COUNTY

For those mines that have not been assigned a state mine number, a letter designation is used (example: Bt-C).

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Mining and reclamation permit number	Type of facility
Belmont	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 740-942-4656 Michael Puskarich, pres.	Bellaire Dock Holloway Tipple	Pultney Flushing	Bt-876 Bt-963	D-0687 D-0763	loading dock tipple
	Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 740-695-2197 George Nicolozakes, pres.	Loading Dock (3)	Pultney	Bt-936	D-0216	loading dock, prep plant—jig, flotation, centrifugal dryer, crushers, screens
	Ohio River Collieries, Inc. P.O. Box 128 Bannock, OH 43972 740-968-3582 Tony Gentile, pres.	Lafferty Tipple Lafferty Truck Shop	Union Union	Bt-947 Bt-1093	D-0773 D-0773	tipple shop
	Ohio Valley Coal Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Powhatan #6 (4)	Smith, Washington	Bt-68	D-0360	prep plant—jigs, cyclones, centrifuges, thickeners, filters, screens
	Ohio Valley Transloading Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Harbour Facility	York	Bt-1198		dock
	R & F Coal Co. 538 North Main St. Cadiz, OH 43907 740-942-2186 D. Michael Jamison, pres.	Bellaire Dock	City of Bellaire	Bt-832	D-0838	dock
	Rayle River Coal 67705 Friends Church Rd. St. Clairsville, OH 43950 740-695-2197 George Nicolozakes, pres.	Rayle River Terminal	Pultney	Bt-1191		coal transfer facility
Carroll	James Bros. Coal Co. 190 S. Main St. P.O. Box 425 Magnolia, OH 44643 330-866-9388 Richard James, Jr., pres.	James Bros. Tipple	Rose	Cl-17	D-0705	tipple
Columbiana	Buckeye Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 330-337-9511 John C. Grisham, pres.	Kensington Preparation Plant (5) Gavers Preparation Plant (29)	West Wayne	Ca-879 Ca-932	D-0806 D-0532	prep plant—heavy-media washer, cyclone, centrifuges, breaker prep plant—Jeffrey jig system
	C & E Coal, Inc. P.O. Box 333 Lisbon, OH 44432 330-424-3739 Amos L. Rawson, pres.	C & E Coal, Inc. (6)	Madison	Ca-892	D-0599	tipple, prep plant—crushers, screens
	State Line Resources, Inc. State Route 154 Negley, OH 44441 330-426-9611 Charles H. Muse, Jr., pres.	State Line Resources, Inc. (33)	Middleton	Ca-505	D-0223	prep plant—crushers, cyclones, screens
	Conesville Coal Preparation Co. 14561 Twp. Rd. 263 Conesville, OH 43811 740-829-2392 H. D. Leppla, gen. mgr.	Conesville Coal Preparation Co. (7)	Franklin	Cn-810		prep plant—jig, cyclones, froth cells, flotation, filter press, screens, dryers
Coshocton	Oxford Mining Co. 1811 Cambridge Rd. P.O. Box 427 Coshocton, OH 43812 740-622-6302 Charles C. Ungurean, pres.	Lori Tipple	Franklin	Cn-736	D-0671	tipple

**1997 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND
ASSOCIATED FACILITIES, BY COUNTY — Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Mining and reclamation permit number	Type of facility
Coshocton (cont.)	R & F Coal Co. 538 North Main St. Cadiz, OH 43907 740-942-2186 D. Michael Jamison, pres.	Barb Tipple	Franklin	Cn-748	D-0661	tipple
	Sugarcreek Clay & Limestone, Inc. P.O. Box 402 Sugarcreek, OH 44681 330-852-4440 Daniel D. Miller, pres.	Sugarcreek Tipple	Crawford	Cn-825	D-0801	tipple
Gallia	Sands Hill Coal Co., Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Alan C. Arthur, pres.	Sands Hill Coal Co., Inc.	Addison	Ga-183	D-0834	tipple
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 Phil A. Bowman, v. pres.	Waterloo Dock #1 Waterloo Dock #2	Addison Addison	Ga-229 Ga-216	D-0725 D-0739	dock, tipple dock
Harrison	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 740-942-4656 Michael Puskarich, pres.	22 Shop	Moorefield	Hn-230		shop
	Harrison Processing Corp. 86395 Mine Rd. P.O. Box 250 Hopedale, OH 43976 740-937-2615 John A. McNab, pres.	Nelms Prep Plant (30)	Green	Hn-169	D-0424	prep plant—heavy-media vessel, heavy-media cyclones, spirals, dryers, thickeners, crushers, screens
	R & F Coal Co. 539 North Main St. Cadiz, OH 43907 740-942-2186 D. Michael Jamison, pres.	Cadiz Machine Shop	Cadiz	Hn-709		shop
Jackson	Sands Hill Coal Co., Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Alan C. Arthur, pres.	Sands Hill Prep Plant (9)	Milton	Jkn-1055	D-0347	prep plant—heavy-media cyclone, hydrocyclones, screens, dryer, crusher, picking table, magnets
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 Phil A. Bowman, v. pres.	Bowman Strip (10)	Jefferson, Madison	Jkn-367	D-0285	prep plant—jig, crushers, breaker, screens, dryers, wash tables
Lawrence	Collins Mining Co. 981 State Rte. 650 Ironton, OH 45638-8600 740-534-9445 C. E. Collins, v. pres.	River Dock	Hamilton	Le-415	D-0777	dock
Mahoning	East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 330-549-2165 W. T. Mackall, pres.	Tipple Washing & Crushing Plant (13)	Beaver Beaver	Mg-621 Mg-623	D-0214	tipple prep plant—cyclones, centrifuges, thickener, filter, crushers, screens, magnets
	Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 330-549-3979 J. E. Thompson, owner	Thompson Bros. Mining Co.	Springfield	Mg-588	D-0711	tipple
Meigs	Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 740-669-2826 Lance Sogan, gen. mgr.	Meigs Mine No. 31 (14)	Salem	Ms-293	D-0354	prep plant—heavy-media washers, flotation, cyclones, centrifuges, thickeners, filters, breaker, screens

**1997 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND
ASSOCIATED FACILITIES, BY COUNTY — Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Mining and reclamation permit number	Type of facility
Monroe	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 Phil A. Bowman, v. pres.	Waterloo Dock #3	Salisbury	Ms-285	D-0698	tipple, dock
	Quarto Mining Co. (subsidiary of CONSOL) 1800 Washington Rd. Pittsburgh, PA 15241-1421 412-831-4000 Ben Statler, sr. v. pres., mining	Powhatan #4 (15)	Salem	Me-8	D-0422	prep plant—jigs, cyclones, centrifuges, thickeners, filters, crushers
Morgan	Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 740-454-1121 Gary Dimmerling, gen. mgr.	Muskingum Mine (16)	Meigsville	Ne-41	D-0378, D-0420	tipple, prep plant—jigs, flotation, cyclones, thickener, filters, crushers, breakers, screens, magnets
Perry	Crooksville Coal Co., Inc. P.O. Box 149 Crooksville, OH 43731 740-982-6651 Ralph L. Allen, pres.	Crooksville Tipple	Salt Creek	Py-339	D-0692	tipple
Scioto	Norfolk Southern Railroad 914 Hayport Rd. Wheelersburg, OH 45694 740-574-8491 Charles G. Howard, asst. to mgr.	NS Wheelersburg Terminal	Porter	So-96		dock
Tuscarawas	Central Fuel Co. County Rd. 55 P.O. Box 165 New Philadelphia, OH 44663 330-339-5049 Keith B. Kimble, gen. mgr.	Central Fuel Co. (20)	York	Ts-1938	D-0264	prep plant—jig, screen, dryers
	Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 330-893-2721 Merle Mullet, pres.	Strasburg Wash Plant (21)	Franklin, Lawrence	Ts-1942	D-0287	prep plant—jigs, cyclones, centrifuges, crushers, screens, picking tables
		Slurry Wash Plant (32)	Franklin, Lawrence	Ts-HC	D-0981	prep plant—cyclones
	Miller Mining, Inc. P.O. Box 525 Sugarcreek, OH 44681 330-852-4511 Olen Miller, pres.	Copperhead Tipple	Sugar Creek, Wayne	Ts-MM	D-0652	tipple
		Barrs Mills Tipple	Sugar Creek	Ts-MM1	D-0876	tipple
Vinton	Sands Hill Coal Co., Inc. P.O. Box 650 Hamden, OH 45634 740-384-4211 Alan C. Arthur, pres.	Sands Hill Tipple/ Preparation Plant (24)	Clinton	Vn-641	D-0309, D-0169	tipple, prep plant—heavy-media washers, flotation, cyclones, centrifuge, crushers, screens, dryer, picking tables, magnets
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 Phil A. Bowman, v. pres.	Benedict Tipple (22)	Swan	Vn-145	D-0159	tipple, prep plant—heavy-media washer, cyclone, crusher, conveyors
		Dundas Tipple	Clinton	Vn-178	D-0185	tipple
Wayne	Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 330-893-2721 Merle Mullet, pres.	Holmes Limestone Preparation Plant (27)	Franklin	Hs-79	D-0283	prep plant—jig, crushers, dryers, screens, conveyors

NOTE: This directory lists only the coal-producing operations. It does not list tipplers, loading docks, preparation plants, or other active, nonproducing operations that would contribute to employment and wage statistics presented in tables 11-17. For those mines that have not been assigned a state mine number, a letter designation is used (example: Bt-C). There is no correlation between the "Seam Number" column and the "Production Tonnage" column. The Seam Number column represents the seams mined at the operation. No production tonnage is listed by seam. Days in production were estimated for those companies not providing this information. To convert short tons to metric tons, multiply the given tonnage by 0.907185.

SEAM IDENTIFICATION OF PRINCIPAL OHIO COALS

[illegible]

Northshore Coal, Inc.	Uniontown	Wheeling	8	60	surface	strip auger Total	3,696 30,437 34,133	252	truck	34,133	1	Bt-B
Ohio Valley Coal Co.	Powhatan #6	Smith	8	62	slope	longwall cont. miner Total	4,074,424 1,027,323 5,101,747	310	rail truck Total	4,095,208 932,653 5,027,861	228	Bt-68
R & F Coal Co.	Bethesda Pit	Goshen, Wayne	9	30	surface	strip auger Total	34,938 18,583 53,521	221	truck	53,521	5	Bt-1168
Valley Mining, Inc.	Egypt Valley West	Kirkwood, Warren	8 9	50 36	surface	strip auger Total	383,421 71,539 454,960	256	truck	451,257	18	Bt-RF2
	Egypt Valley	Kirkwood, Warren	9	36	surface	strip auger Total	219,858 13,116 232,974	302	truck	232,974	12	Bt-VM
Frank Widmor Coal Co., Inc.	Frank Widmor Coal Co., Inc.	Pultney	8 9	72 46	surface	strip auger Total	11,548 3,257 14,805	20	truck	14,805	1	Bt-1190
CARROLL COUNTY—Total production = 60,353 tons												
Buckeye Industrial Mining Co.	R & T	Fox	7A	24	surface	strip auger Total	23,316 10,201 33,517	129	truck	33,517	2	Cl-BIM
Miller Mining, Inc.	Geiger-Carroll Mine	Brown	5,6,6A		surface	strip	4,371	12	rail truck Total	1,500 2,871 4,371	1	Cl-514 ²
Myers Mining	Harlem Mine #4	Lee	H	20	surface	strip	5,930	102	truck	5,930	1	Cl-HM1
Triple A Construction	Harlem Mine #5	Union, Lee	H	14	surface	strip	16,275	205	truck	16,275	2	Cl-M
	Regal Mining Project	Perry	H	18	surface	strip	260	2	truck	260	1	Cl-T
COLUMBIANA COUNTY—Total production = 1,081,783 tons												
Buckeye Industrial Mining Co.	Benner Mountain Spring #15	Center	7A	42	surface	strip	1,078	26	truck	1,078	2	Ca-B11
	West Point	Madison	7A	35	drift	cont. miner	91,430	70	conveyor	91,430	1	Ca-349
	Mountain Spring #11	Madison	7A	37	drift	cont. miner	336,770	310	truck	336,770	5	Ca-987
	Taylor	Madison	7A		surface	strip	245,136	231	conveyor	245,136	5	Ca-1003
			7A			auger	142,351	234	truck	178,661	1	Ca-B12
						Total	36,310 178,661					
C & E Coal, Inc.	Amato	Center, Wayne	6	40	surface	strip auger Total	57,030 25,232 82,262	134	truck	82,121	13	Ca-986
Commercial Minerals, Inc.	Ferris	Elkrun	6	38	surface	strip auger Total	26,876 10,372 37,248	74	truck	37,248	1	Ca-CE
	Ketchum North	Center	7	29	surface	strip auger Total	6,665 9,426 16,091	74	truck	16,091	3	Ca-998
	Ketchum West	Center, Wayne	7	30	surface	strip	2,460	18	truck	2,460	1	Ca-CM1
	Buckeye Rd.	Madison	7, 6	36	surface	strip auger Total	33,438 1,641 35,079	162	truck	35,079	3	Ca-997
D. & D. Mining Co.	D. & D. Strip	Unity	4 5	27 12	surface	strip	55,568	255	truck	62,570	4	Ca-348

¹Employment estimated for all Marietta Coal Co. operations.²Miller Mining, Inc. listings estimated from partial data supplied by Copperhead Coal Co.

1997 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1997	Disposition		Employment			State mine number
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Under-ground	Sur-face	Non produc-tion	
COSHOCTON COUNTY—Total production = 435,936 tons														
BRYCO Holmes Limestone Co. Miller Mining, Inc.	BRYCO Miley Snyder	Franklin, Virginia Mill Creek Crawford	5	48	surface	strip	56,909	151	truck	56,909		5	1	Cn-B
			5, 6	30	surface	strip	23,484	113	truck	23,484		2		Cn-H1
			5, 6		surface	strip	64,401	59	truck	10,000		5	1	Cn-TS ³
									truck	54,401				
									Total	64,401				
Oxford Mining Co., Inc. R & F Coal Co.	Coshocton Landfill Broken Aro/Broken Aro Remine	Franklin Bedford, Jackson	6		surface	strip	9,132	32	truck	9,132		1		Cn-OM
			5	21	surface	strip	92,661	218	truck	92,575		7	7	Cn-RF3
			6	43		auger	674							
						Total	93,335							
R & R Minerals, Inc.	Ishmael Marsh Lumber Oxford-Rettos	Bedford, Washington Jackson Lafayette	6	33	surface	strip	2,842	6	truck	2,819		1	1	Cn-RF4
			6	28	surface	strip	17,490	14	truck	17,437		1	1	Cn-RF6
			5	30	surface	strip	107,936	116	truck	111,248		6	5	Cn-OX1
			6	35		auger	4,224							
						Total	112,160							
R & R Minerals, Inc.	Carey-Levering Fresno-McCleary	Virginia White Eyes	6	28	surface	strip	38,233	39	truck	37,922		1	1	Cn-RF5
			5	26	surface	strip	17,950	165	truck	17,950		2	1	Cn-841
			6	28										
GALLIA COUNTY—Total production = 334,664 tons														
Sands Hill Coal Co., Inc.	Coal Valley	Huntington	6	70	surface	strip	333,422	293	water truck conveyor	75,523		19	5	Ga-629
			6A	12					Total	91,914				
									165,985					
VFL Technologies Corp.	Gavin Plant Landfill	Cheshire	8A	48	surface	strip	1,242	3	truck	1,242		1		Ga-VFL
GUERNSEY COUNTY—Total production = 467,715 tons														
Holmes Limestone Co. Northshore Coal, Inc.	Byesville Buckeyeville Jacobs	Jackson Jackson Jackson	5, 6	30	surface	strip	57,117	284	truck	57,117		4	4	Gy-327
			7	60	surface	strip	3,451	41	truck	3,451		1	1	Gy-315
			7	38	surface	strip	6,766	108	truck	6,766		5	5	Gy-N
Oxford Mining Co., Inc. R & F Coal Co.	Claysville Wynn-Fausnight	Spencer Wheeling	7	18	surface	strip	46,088	141	truck	46,088		1	1	Gy-OM
			5	28	surface	strip	205,467	188	truck	226,104		16	13	Gy-307
			6	28		auger	22,493							
						Total	227,960							
Valley Mining, Inc.	Mesa-Miller Snyder-Bush	Wheeling Wheeling	6	27	surface	strip	52,848	54	truck	56,137		4	3	Gy-317
						auger	3,749							
						Total	56,597							
			6	36	surface	strip	44,883	254	truck	69,736		8	2	Gy-318
						auger	24,853							
						Total	69,736							
HARRISON COUNTY—Total production = 2,280,972 tons														
Consolidated Coal Co. Cravat Coal Co.	Mahoning Valley Mine Oak Park Pit	Athens Cadiz	9	41	surface	strip	383,205	110	truck	383,205		22	5	Hn-700
			8	48	surface	strip	38,003	63	water truck	5,333		5	2	Hn-C
									32,670					
									Total	38,003				

	Knight Pit	Cadiz	8	42	surface	strip	43,982	66	water truck Total		3	1	Hn-N
Harrison Mining Corp.	Nelms Mine-Cadiz Portal	Green	6A	60	slope	cont. miner	1,578,683	359	533,712 133,273 772,644 2,707 1,442,336, Total	95		42	Hn-710
K.C.C.I. Melvin Schaney Schiappa Coal Co., Inc.	Apex Schaney Pit Cherry Valley	German Green Green	8 8 8 8A	48 48 56 20	surface surface surface	strip strip strip auger Total	1,166 4,573 163,965 4,595 168,560	3 103 277	truck truck truck truck		1 2 18	1	Jfn-K ⁴ Hn-759 Hn-767
Sunnydale Mining Varkony Mining Co.	Dodds Tony Pit	Archer Green	8 8 8A	50 54 16	surface surface	strip strip	9,033 53,767	10 184	truck truck		1 7	1	Hn-761 Hn-217
HOLMES COUNTY—Total production = 123,890 tons													
Holmes Limestone Co.	Charm-Berlin 557 241 Plant	Berlin, Walnut Creek Clark Hardy	5, 6 5, 6 4	30 30 30	surface surface surface	strip strip strip	82,399 33,397 8,094	183 169 43	truck truck truck		5 3 3		Hs-HLC1 Hs-HL Hs-67
JACKSON COUNTY—Total production = 1,148,512 tons													
Cedar Heights Clay Co. R. A. Eberts Co., Inc. Sands Hill Coal Co., Inc.	Harrison Dark Hollow Lincoln	Madison Jefferson Jackson	5 3A 4A 5 6 7	24 43 37 17 17	surface surface surface	strip strip strip	4,091 153,808 153,618	10 184 150	truck truck water truck conveyor Total		1 15	2	Jkn-CH2 Jkn-1070 Jkn-S3
	Sands Hill Strip	Milton	4A	42	surface	strip	16,536	20	water truck conveyor Total				Jkn-1071
	Milton	Milton	4A 5 6 6A	49 36 22 17	surface	strip	333,679	293	water truck conveyor Total		31		Jkn-SHCC ⁵
Waterloo Coal Co., Inc.	Bowman Strip	Bloomfield, Madison	4A 5 6 7	48 34	surface	strip	486,780	277	truck		39	35	Jkn-367
JEFFERSON COUNTY—Total production = 825,922 tons													
Anthony Mining Co., Inc.	Omaits	Smithfield, Wayne	8 8A	56 20	surface	strip auger Total	130,089 13,456 143,545	276	truck		18	1	Jfn-835
Cravat Coal Co.	Salt Run	Wells	8	48	surface	strip auger Total	129,173 54,570 183,743	134	water truck Total		9	1	Jfn-JC
F. & M. Coal Co.	F. & M. Coal Co. F. & M. Coal Co.	Wayne Wayne	8 8	54 54	surface	strip strip	2,811 15,591	79 156	truck truck		1 2		Jfn-FM Jfn-784

³Miller Mining, Inc. listings estimated from partial data supplied by Copperhead Coal Co.

⁴See also Jefferson County.

⁵Employment reported for Jkn-SHCC is a summary for all Sands Hill Coal Co., Inc. operations in Jackson County.

1997 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1997	Disposition		Employment			State mine number
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Under-ground	Production	Non produc-tion	
JEFFERSON COUNTY (continued)														
K.C.C.I. Sterling Mining Co. Valley Mining	Apex Sterling North Sterling South Piergalini	Springfield Brush Creek Brush Creek Smithfield	8	36	surface drift drift surface	strip	1,166	3	truck	1,166	1	1	Jfn-K ^e	
			7A	36		cont. miner	255,593	153	truck	255,593	33	4	Jfn-823	
			7A	36		cont. miner	221,887	117	truck	221,887	33	4	Jfn-ST	
			8A	22		strip	1,586	14	truck	1,586	1	4	Jfn-831	
LAWRENCE COUNTY—Total production = 7,179 tons														
Belville Mining Co., Inc.	Brady Creek Davis Pit	Washington Washington	4	15	surface surface	strip	737	10	truck	737	1		Le-B	
			4A	30		strip	6,442	45	truck	6,442	4		Le-BM	
MAHONING COUNTY—Total production = 37,241 tons														
ESSROC Cement Corp.	Carbon Pit	Poland, Springfield	5		surface	strip	37,241	32	truck	37,241	1	1	Mg-EM	
MEIGS COUNTY—Total production = 4,629,872 tons														
Southern Ohio Coal Co.	Meigs Mine #2	Columbia	4A	57	shaft	longwall cont. miner Total	2,647,405 207,821 2,855,226	288	conveyor	2,826,763	216	94	Ms-294	
	Meigs Mine #31	Salem	4A	57	shaft	longwall cont. miner Total	1,563,058 211,588 1,774,646	142	conveyor	1,775,712	116	135	Ms-293 ^r	
MONROE COUNTY—Total production = 3,243,474 tons														
Quarto Mining Co. (subsidiary of Consolidation Coal Co.)	Powhatan #4	Salem	8	60	shaft	longwall cont. miner Total	2,809,651 433,823 3,243,474	262	water	3,132,360	223	125	Me-4	
MORGAN COUNTY—Total production = 1,574,663 tons														
Central Ohio Coal Co.	Muskingum Mine	Bristol, Manchester	9	47	surface	strip auger Total	1,553,843 20,820 1,574,663	216	truck conveyor Total	1,578,827 1,578,832	38	178	Ne-41 ^s	
MUSKINGUM COUNTY—Total production = 690,023 tons														
Oxford Mining Co. R & F Coal Co.	Adamsville Adamsville	Madison Madison	6, 6A 6 6A	28 23	surface surface	strip strip auger Total	187,726 501,658 639 502,297	311 239	truck truck	187,726 498,209	12 21	2 15	Mum-O Mum-RF	
NOBLE COUNTY—Total production = 736,604 tons														
B & N Coal, Inc.	Lee Pit	Elk	9	30	surface	strip	68,805	258	truck	68,805	8	1	Ne-155	
	Flint Pit	Elk	9	30	surface	strip	10,567	105	truck	10,567	1	1	Ne-BN1	
	Estadt Pit	Enoch, Jefferson	9	30	surface	strip	83,049	257	truck	83,049	10	1	Ne-BN	
	Ullman Pit	Elk	9	30	surface	strip	99,469	127	truck	99,469	10	1	Ne-151	
	Barnes Ridge Pit	Marion	9	42	surface	strip	365,245	256	truck	365,245	17	1	Ne-BN2	
Central Ohio Coal Co.	Muskingum Mine	Sharon	9	47	surface	strip auger Total	108,021 1,448 109,469	17	conveyor	108,692	3	4	Ne-41 ^s	
PERRY COUNTY—Total production = 1,114,029 tons														
Avis Coal Co.	Congo	Monroe, Pleasant, Salt Lick	6 6A	60 72	surface	strip auger Total	103,937 43,695 147,632	261	truck	147,632	10	3	Py-A	

Company	Mine	County	7	60	Surface	Strip Auger	Total	Truck	Tons	4	3	Py-340
Buckingham Coal Co., Inc.	Thompson Mine	Monroe	6	60	surface	strip	49,609	238	59,304	7	2	Py-BC1
	Bolyard Mine	Monroe, Pleasant	6A	72	surface	strip	76,669	261	93,672	1	5	Py-B Py-BM1
	Rogers Hollow Pine Run	Monroe, Salt Lick Salt Lick	6 6A	102 54 16	surface surface	strip strip auger Total	10,754 81,815 43,288 125,103	51 261	10,754 127,502	2	1	Py-BM2
	Imler	Salt Lick	6	84	surface	strip	20,253	149	22,787	32	13	Py-O
Oxford Mining Co., Inc.	Z-Mack	Clayton, Pike	6A 7 5, 6	15 48	surface	strip	653,568	307	653,568	13	3	Sk-246
STARK COUNTY—Total production = 5484,517 tons												
American Landfill, Inc.	American Landfill, Inc.	Sandy	6	36	surface	strip	29,320	146	29,320	3	1	Sk-247
Buckeye Industrial Mining Co.	Clapper Robertsville Close	Osnaburg Paris Pike	6 6 5	36 30	surface surface surface	strip strip strip	46,012 161,538 4,759	138 284 50	46,012 161,538 4,759	9 1	1	Sk-B Sk-B Sk-B
ENZ, Inc.	Fox Pit	Sandy	4	48	surface	strip	35,241	44	35,241	17	7	Sk-205 Sk-208 Sk-235
Holmes Limestone Co.	Sickafosse Pit Bolivar Mine East Canton	Sandy Bethlehem Osnaburg	4 5, 6 5, 6	48 30 30	surface surface surface	strip strip strip auger Total	123,748 47,494 98,978 34,212 133,190	263 142 286	123,748 47,494 133,190	10		Sk-HCC
Waste Management of Ohio, Inc.	Countywide RDF	Pike, Bethlehem	5	18	surface	strip	3,215	3	3,215	1		Sk-217
TUSCARAWAS COUNTY—Total production = 1,167,016 tons												
Belden Brick Co.	Wallick Pit Moonaw Pit	Franklin, Wayne Sugar Creek	4 4	24 16	surface surface	strip strip	8,731 2,165	10 8	8,731 2,165	1	1	Ts-1841 Ts-1517
Blue Jay Enterprises of Ts. Co., Inc.	Shanesville Swonger-Waltz Mine Blue Jay #1	Sugar Creek Sandy Sandy	4 4 4	8 24 20	surface surface surface	strip strip strip	1,014 1,350 3,882	3 23 47	1,014 1,350 3,882	1	1	Ts-1939 Ts-520 Ts-BJ
Daron Coal Co., Inc.	Pleasant Valley Mine	Union	7	20	surface	strip auger Total	30,237 19,351 49,588	42	49,588	3		Ts-1991
	Reed Mine	Union	6	42	surface	strip auger Total	76,339 30,853 107,192	128	107,192	7	2	Ts-DC
	Peach Pit	Union	7	20	surface	strip auger Total	43,800 8,164 51,964	41	51,964	3	1	Ts-DCC
Holmes Limestone Co.	Stone Creek Donnison	Jefferson, York	7	30	surface	strip auger Total	134,436 15,250 149,686	283	149,686	10		Ts-2023
	Rush	Rush	7	30	surface	strip auger Total	44,290 14,700 58,990	285	58,990	6		Ts-HLC
	Reynolds Dutch Valley	Salem Sugar Creek	5, 6 5, 6	30 30	surface surface	strip strip	4,443 19,313	10 92	4,443 19,313	1 3		Ts-2045 Ts-H3

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*See also Harrison County.
 *See also Wayne County.
 *See also Noble County.
 *See also Morgan County.

TUSCARAWAS COUNTY (continued)

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1997	Disposition		Employment			State mine number
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Production		Non produc-tion	
											Under-ground	Sur-face		
TUSCARAWAS COUNTY (continued)														
Kimble Clay & Limestone Co.	Kimble Clay & Limestone Co.	Auburn, York	56	2836	surface	strip auger Total	217,146 27,741 244,887	299	truck	244,887	13	2	Ts-2019	
	Kimble Clay & Limestone Co.	Dover	46	202836	surface	strip	13,717	196	truck	13,717	2	1	Ts-1727	
	Kimble Clay & Limestone Co. Kimble Clay & Limestone Co.	Sugar Creek Washington	3A, 47		surface surface	strip strip auger Total	34,165 26,867 8,370 35,237	267 255	truck truck	34,165 35,153	4 3		Ts-K4 Ts-K5	
	Kimble Clay & Limestone Co.	York	5,6		surface	strip auger Total	12,800 5,117 17,917	97	truck	17,917	1		Ts-RM	
	L & M Mineral Co.	Luikert Evans et al. Hicks, Panzer RMI #2	Mill, Warwick Rush Franklin, Wayne	5, 67 6A, 75 5A	3612	surface surface surface	strip strip strip auger Total	8,436 4,106 23,656 86,482 1,692 88,174	7 5 30 288	truck truck truck truck	8,436 4,106 23,656 88,174	2 1 6 8	1 1 3	Ts-1914 Ts-1884 Ts-2041 Ts-2007
Miller Mining, Inc.	Ragersville-Putt	Auburn, Bucks	5, 6		surface	strip	7,502	175	rail truck Total	2,000 5,502 7,502	12	1	Ts-MM3 ¹⁰	
Valley Mining, Inc.	Wilmar Farms-Marino	Dover	3A, 4		surface	strip	3,590	32	rail truck Total	700 2,890 3,590	3	1	Ts-2039 ¹⁰	
	Alpine Hills	Dover	6, 6A		surface	strip	89,371	15	rail truck Total	17,910 71,461 89,371	1	1	Ts-MM5 ¹⁰	
	Mushrush	Sandy	5, 6		surface	strip	87,623	108	rail truck Total	17,500 70,123 87,623	8		Ts-AL ¹⁰	
	Crim	Mill	7	30	surface	strip auger Total	4,601 3,849 8,450	89	truck	8,450	1	2	Ts-2005	
	Elliot-Smith	Salem	6	36	surface	strip auger Total	37,439 2,676 40,115	254	truck	40,115	3	1	Ts-VM	
Zoar Mining Co.	Zoar Mining Co.	Sandy	4		surface	strip	1,752	2	truck	1,752	1		Ts-540	
VINTON COUNTY—Total production = 3,584,007 tons														
R. A. Eberts Co., Inc. Sands Hill Coal Co., Inc.	Green Pit Sands Hill Strip #3	Madison Clinton	5W 4A 56	1236323512	surface surface	strip strip	2,978 374,177	25 293	truck water truck conveyor Total	2,978 84,754 103,150 186,273 374,177	1 35	57	Vn-182 Vn-Su	

Southern Ohio Coal Co.	Elk	Elk	3A W 4A 5	33 33 34 34	surface	strip	103,570	water truck conveyor Total	23,460 28,551 51,559 103,570			Vn-194
	Meigs Mine #31	Wilkesville	4A	57	drift	longwall cont. miner Total	1,563,058 211,587 1,774,645	conveyor	1,775,711	116	135	Ms-293 ¹²
	Dundas	Clinton	3 4A 5 6 7	24 24 24 24 24	surface	strip	916,835	truck	916,835	59	28	Vn-191
	Allied Pit	Elk	4A 5 6	30 24 25	surface	strip	411,802	truck	411,802	21	9	Vn-184
WASHINGTON COUNTY—Total production = 77,718 tons												
B & N Coal, Inc.	Shilling Pit	Aurelius	9	30	surface	strip	77,718	truck	77,718	7	1	Ne-1008

¹⁰Miller Mining, Inc. listings estimated from partial data supplied by Copperhead Coal Co.

¹¹Employment reported for Vn-S is a summary for both Sands Hill Coal Co., Inc. operations in Vinton County.

¹²See also Meigs County.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Ts-A).

If there are no sales or production figures given for an operation, that operation reported no sales or production in 1997.

To convert short tons to metric tons, multiply the given tonnage by 0.907185.

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
A-1 All Ohio Sand & Gravel Co. 2267 Springfield Center Rd. Akron, OH 44312 330-644-0700 Sam Serves, pres.	A-1 All Ohio Sand & Gravel Co. (583)	Summit	sand & gravel	86,442	86,442	St-50	IM-722
ATS Enterprises P.O. Box 128 Haverhill, OH 45636 614-532-4058 Lowell Gullett, plant mgr.	A.T.S. Enterprises (306)	Scioto	sand & gravel	378,401	381,032	So-79	IM-221
Acme Sand & Gravel 128 First St. W Strasburg, OH 44680 330-756-3177 Susan K. Malcuit, pres.	Acme Sand & Gravel (612)	Tuscarawas	sand & gravel			Ts-A	IM-1218
Adrian Sand & Stone 3810 Herr Rd. Sylvania, OH 43560 419-843-5498 Jeffrey Stansley, pres.	Ridge Quarry (196)	Hancock	limestone	170,000	250,000	Hk-A	IM-1299
Agg Rok Materials Div. of Wapak Sand & Gravel Co. 711 Frank Rd. Columbus, OH 43223 614-875-5500 William G. Heffner, pres.	Agg Rok (94)	Franklin	sand & gravel	470,931	470,931	Fn-36	IM-302
Akzo Nobel Salt, Inc. P.O. Box 6920 Cleveland, OH 44101 216-651-7200 Harry Burns, pres	Cleveland Mine (1)	Cuyahoga	salt	821,019	821,019	Cya-30 ¹	
Alan Stone Co., Inc. P.O. Box 127 Chesterhill, OH 43728 740-554-6191 Claudia Staley, pres.	Alan Stone Co., Inc. (51) Marietta Quarry (43)	Belmont Washington	sandstone sandstone			Bt-1193 Wn-45	IM-1117 IM-125
William Albert, Inc. 1300 Cassingham Hollow Rd. Coshocton, OH 43812 740-622-3045 William Albert, pres.	William Albert, Inc. (438) (88)	Coshocton	sand & gravel clay	16,922	18,547	Cn-828	IM-1026
Alden Sand & Gravel Co. 2504 Northampton Rd. Cuyahoga Falls, OH 44223 330-928-3249 Joanne Alden, pres.	Alden Sand & Gravel Co.(496)	Summit	sand & gravel	14,587	14,587	St-55	IM-589
Allgeier & Son, Inc. 6386 Bridgetown Rd. Cincinnati, OH 45248 513-574-3735 Earl W. Allgeier, pres.	Pit 2 (467) Pit 1(521)	Hamilton Hamilton	sand & gravel sand & gravel	105,000	105,000	Hmn-AS Hmn-AS1	IM-1106 IM-797
Allied Corp., Inc. 1749 Highland Dr. Twinsburg, OH 44087 216-425-7861 Charles Rauh, pres.	Allied Corp., Inc. (435)	Stark	sand & gravel			Sk-173	IM-879
American Landfill, Inc. 1 American Way Warren, OH 44484 330-856-8800 Stephen Kilper, pres.	American Landfill, Inc. (123) (123)	Stark	clay shale	3,600 12,362	3,600 12,362	Sk-246	IM-1114

¹This mine was operated January through April 1997 by Akzo Nobel Salt, Inc. and May through December 1997 by Cargill Incorporated.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
American Sand & Gravel, Inc. 8188 Wales Rd. NW North Canton, OH 44720 330-494-6455 Christopher Scala, pres.	American Sand & Gravel (387) American Sand & Gravel, Plant 2 (386) Crystal Springs (455)	Portage Stark Stark	sand & gravel sand & gravel sand & gravel	3,757 1,090,963	3,757 1,090,963	Pe-95 Sk-203 Sk-243	IM-212 IM-654 IM-908
Apache Aggregate & Paving Co. 46626 County Route 495 Coshocton, OH 43812 740-622-5904 Charlene B. Ross, pres.	Apache Aggregate & Paving Co. (69) Apache Aggregate & Paving Co. (70)	Coshocton Coshocton	sand & gravel sand & gravel	39,418 71,507	55,769 75,177	Cn-718 Cn-783	IM-227 IM-717
Ashcraft Sand & Gravel, Inc. 5850 Dry Fork Rd. Cleves, OH 45002 513-367-2177 Otis Ashcraft, pres.	Ashcraft Sand & Gravel, Inc. (120)	Hamilton	sand & gravel	84,094	84,094	Hmn-54	IM-710
Athens Hocking Reclamation Center 35380 Hocking Dr. P.O. Box 946 Logan, OH 43138 740-385-6019 Edward F. Kilbarger, pres.	Athens Hocking Reclamation Center (81)	Athens	clay	1,773	1,773	As-594	
Atlas Towing Co. P.O. Box 1632 Parkersburg, WV 26101 304-428-0341 Christopher V. Criss, pres.	Belpre Bank Run (432)	Washington	sand & gravel	65,980	65,980	Wn-54	IM-383
Ayers Limestone Quarry, Inc. 2000 Colerain Pike P.O. Box 67 Martins Ferry, OH 43935 740-633-2958 Thomas E. Ayers, pres.	Ayers Limestone Quarry (12)	Belmont	limestone	103,950	103,950	Bt-716	IM-1
B & L Excavating 203 West Airport Highway Swanton, OH 43558 419-825-1218 Boyd Rhodes, owner	B & L Pit (654)	Fulton	sand & gravel			Ftn-BL1	IM-1282
B & L Sand Co. 441 Iowa St. Ashland, KY 41101 606-325-8301 Janet R. Griffiths, pres.	B & L Sand Co. (167)	Lawrence	sand & gravel	46,409	46,409	Le-430	IM-844
B & N Coal, Inc. P.O. Box 100 Dexter City, OH 45727 740-783-3575 Carl Baker, Jr., pres.	B & N Coal, Inc. (179)	Noble	limestone			Ne-B	IM-897
Baker Sand, Inc. 7800 White Rd. Burbank, OH 44214 330-948-1448 John E. Baker, pres.	Baker Sand, Inc. (203)	Medina	sand & gravel	552,813	552,811	Ma-20	IM-448
Barrett Paving Materials, Inc. Midwest South 7374 Main St. Cincinnati, OH 45244 513-271-6200 Xavier Lepercq, pres.	Perintown (59)	Clermont	sand & gravel	70,724	302,329	Ct-9	IM-526
Barrett Paving Materials, Inc. Midwest Division-North P.O. Box 14591 Dayton, OH 45413-0591 937-279-3200 Gerald Bushelman, pres.	Fairborn #141 (461) Gregory Quarry (66) Barrett Paving Materials, Inc. (177)	Clark Miami Miami	sand & gravel limestone limestone	699,000 459,000	699,000 512,000	Ck-28 Mi-502 Mi-BPM	IM-1100 IM-414 IM-1169
Barrett Paving Materials, Inc. 3835 Centennial Rd. Sylvania, OH 45860 419-841-2816 Michael E. Smith, plant mgr.	Sylvania Quarry (160)	Lucas	limestone	663,000	663,000	Ls-12	IM-953

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Bartley & Bolin Excavating 1242 County Rd. 1475 Ashland, OH 44805 419-289-1507 Clarence Bolin/ Hershel Bartley, owners	Simington Rd. (509) Bartley & Bolin, Inc. (409)	Ashland Richland	sand & gravel sand & gravel	4,723 116,824	4,723 116,824	Ald-16 Rd-20	IM-1120 IM-617
Baycliffs Corp. 15400 Pearl Rd. #201 Strongsville, OH 44136 440-238-1905 Carl Zipfel, pres.	Johnson Island Quarry (198)	Ottawa	limestone			Oa-BC	IM-1288
Beaver Excavating, Inc. P.O. Box 6059 Canton, OH 44706 330-478-2151 W. Mark Sterling, pres.	Gavin Plant Landfill (79) (202) Stone Products (607) (162)	Gallia Stark	sandstone clay sand & gravel clay	581,230 2,000	581,230 2,000	Ga-VFL ² Sk-BE	IM-1314 IM-1202
Beck Sand & Gravel, Inc. 2820 Webb Rd. Ravenna, OH 44266 330-626-3863 Robert E. Wenrich, pres.	Beck Sand & Gravel, Inc. (256)	Portage	sand & gravel	225,647	225,647	Pe-50	IM-96
Paul D. Beery Trucking Co. 4770 Cincinnati-Zanesville Rd. NE Lancaster, OH 43130 740-653-5061 Paul D. Beery, pres.	Paul D. Beery Trucking Co. (401)	Fairfield	sand & gravel	7,790	780	Fd-14	IM-933
Belden Brick Co. P.O. Box 910 Canton, OH 44701 330-852-2424 William H. Belden, Jr., pres.	Moomaw Pit (187) (62) (56) (56) Belden Pit (78) (57) (57) Wallick Pit (71) (58) (58) Shanesville Pit (206) (59) (59) Beagle Pit (60) Plotner Pit (181) (147) (147) Belden Brick Co. (191) (177) (177)	Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas	limestone sandstone clay shale sandstone clay shale sandstone clay shale limestone clay shale limestone clay shale limestone clay shale	6,575 67,185 45,947 1,967 36,965 40,556 130,472 25,124 4,543 30,536 10,760	6,575 67,185 45,947 1,967 36,965 40,556 130,472 25,124 4,543 30,536 82,466	Ts-1517 Ts-1646 Ts-1841 Ts-1939 Ts-1960 Ts-B Ts-BB	IM-46 IM-44 IM-45 IM-47 IM-48 IM-49 IM-1221
Belville Mining Co., Inc. P.O. Box 834 Ironton, OH 45638 740-643-2331 Thomas J. Belville, pres.	Brady Creek (159) (93)	Lawrence	limestone clay	10,624 6,534	10,624 6,534	Le-B	IM-1188, D-0746
Benchmark Materials 8130 Brint Rd. P.O. Box 278 Sylvania, OH 43560-0278 419-882-0123 John B. Lawson, pres.	Waterville (52) Sylvania (53) Paulding (86) Flat Rock (107) Bloomville (108)	Lucas Lucas Paulding Seneca Seneca	limestone limestone limestone limestone limestone	351,208 833,325 221,112 2,044,151 528,637	344,105 797,971 271,140 2,315,123 483,546	Ls-1 Ls-3 Pg-7 Sa-1 Sa-3	IM-575 IM-580 IM-513 IM-347 IM-349
Best Sand Corp. 11830 Ravenna Rd. Chardon, OH 44024 440-946-3441 Charles Fowler, pres.	Best Sand Corp. (17) Schrader Quarry (45) Best Sand Corp. (34)	Geauga Pike Ross	sandstone sandstone sandstone	763,150 144,007	1,016,116 209,347	Gea-3 Pke-31 Rs-16	IM-89 IM-835 IM-172
Beverly Slag Co. P.O. Box 599 McConnelsville, OH 43756 740-962-5621 Carl L. Price, v. pres.	Devola Pit (364)	Washington	sand & gravel	1,275	1,275	Wn-55	IM-669

²This mine was operated January through July 1997 by VFL Technology Corp. and August through December 1997 by Beaver Excavating, Inc.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Big T Mining P.O. Box 121 Haverhill, OH 45636 740-532-3951 Brian Hughes, owner	Big T Pit (663)	Scioto	sand & gravel	2,648	6,000	So-BT	IM-1286
Big Walnut Sand & Gravel, Inc. 2112 Eakin Rd. Columbus, OH 43223 614-275-2004 James Hughes, pres.	Big Walnut Sand & Gravel Co. (97)	Franklin	sand & gravel	39,568	39,568	Fn-14	IM-832
Black Top Contracting, Inc. P.O. Box 98 Belpre, OH 45714 740-753-1181 Tim Maiden, pres.	Black Top #1 (19)	Athens	sand & gravel	28,595	28,595	As-588	IM-630
E. E. Blair Construction Co. P.O. Box 309 Wheelersburg, OH 45694-0309 740-574-6575 Edwin E. Blair, pres.	Blair Pit (303)	Scioto	sand & gravel	121,591	121,591	So-98	IM-474
Blue Jay Enterprises of Ts. Co., Inc. P.O. Box 641 Zoar, OH 44697 330-874-2048 Leland Ervin, pres.	Swonger Pit (207) (85)	Tuscarawas	limestone	207	207	Ts-520	IM-214
	Blue Jay Pit (200) (85)	Tuscarawas	clay shale limestone	10,355 6,120	10,355 6,120	Ts-BJ	IM-1285
Blue Stone Sand & Gravel, Inc. 14376 N. Cheshire St. P.O. Box 567 Burton, OH 44021 330-274-2451 David Ronyak, pres.	Blue Jay Pit (201) (201)		clay shale	21,009 5,480	21,009 5,480		
	Blue Stone Pit #1 (673) Blue Stone Pit #2 (674)	Portage Portage	sand & gravel sand & gravel			Pe-B1 Pe-B2	IM-1296 IM-1305
Bluffton Stone Co. P.O. Box 26 Bluffton, OH 45817-0026 419-358-6941 Brent Gerken, pres.	Bluffton Stone Co. (3)	Allen	limestone	384,270	389,666	An-1	IM-485
Blum Mining Co. P.O. Box 232 Carrollton, OH 44615 330-627-2670 Raymond Blum, pres.	Blum Mining Co. (161) (476)	Mahoning	limestone sand & gravel			Mg-629	IM-1008
Bowerston Shale Co. 515 Main St. P.O. Box 199 Bowerston, OH 44695 740-269-2921 William U. Milliken, pres.	Bowerston (11) Scott Farm (109)	Harrison Harrison	shale shale	36,186	36,186	Hn-152 Hn-B	IM-42 IM-1020
Bowerston Shale Co. 1329 Seven Hills Rd. NE Newark, OH 43055 740-763-3921 William U. Milliken, pres.	Hanover (31) Frazeyburg (38) (38)	Licking Muskingum	shale clay shale	17,002 9,501	17,002 9,501	Lg-501 Mum-776	IM-257 IM-256
Gaston Bowling, Inc. P.O. Box 330 Oxford, OH 45056 513-523-8805 Gaston Bowling, pres.	Indian Creek Sand & Gravel Co. (37)	Butler	sand & gravel	7,890	7,890	Br-40	IM-493
D. H. Bowman & Sons, Inc. 1201 Mill St. Bellville, OH 44813-1282 419-886-2711 Richard D. Bowman, pres.	D. H. Bowman & Sons, Inc. (287)	Richland	sand & gravel	48,999	70,818	Rd-4	IM-279, IM-1255
Boyas Excavating, Inc. 10055 Sweet Valley Dr. Cleveland, OH 44125-4247 216-447-0175 Pete Boyas, pres.	Boyas' Valley View Quarry (595) (13)	Cuyahoga	sand & gravel sandstone			Cya-42	IM-686

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Boyd Excavating 9553 County Rd. 28 Zanesfield, OH 43360 937-465-3290 Jeff Boyd, pres.	Woodard Pit (669)	Logan	sand & gravel	4,560	4,560	Lgn-B	IM-1309
Briar Hill Stone Co. P.O. Box 457 Glenmont, OH 44628 330-377-5100 F. L. Waller, pres.	Quarry #26 (4) Quarry #3 (5) Quarry #32 (6) Quarry #24 (7) Quarry #18 (8) Quarry #54 (46) Quarry #55 (44) Quarry #31 (19) Quarry #6 (23)	Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Holmes Knox	sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone	1,045 4,928 3,244 1,714 15,856	1,045 4,928 3,244 1,714 15,856	Cn-13 Cn-659 Cn-686 Cn-692 Cn-695 Cn-809 Cn-815 Hs-49 Kx-12	IM-397 IM-232 IM-504 IM-294 IM-402 IM-909 IM-939 IM-418 IM-445
Briggs Sand & Gravel, Inc. Route 4 Box 303 County Rd. 10 Marietta, OH 45750 740-373-3363 James F. Briggs, pres.	Briggs Sand & Gravel, Inc. (365)	Washington	sand & gravel	17,280	17,280	Wn-508	IM-57
Broadway Sand & Gravel, Inc. 2000 Sandridge Dr. Dayton, OH 45439 937-299-1166 George D. Jones, v. pres.	Broadway Sand & Gravel, Inc. (225)	Montgomery	sand & gravel	45,828	45,828	My-65	IM-594
Broshear Contractors, Inc. 2520 Millville-Ross Rd. Hamilton, OH 45013 513-863-3388 Gerald Broshear, pres.	Ross Twp. Gravel (31)	Butler	sand & gravel	17,773	17,773	Br-48	IM-562
Browning-Ferris Industries of Ohio, Inc. 530 North Camp Rd. Port Clinton, OH 43452 419-635-2615 Jim Cosman, pres.	Ottawa County Landfill (198)	Ottawa	clay	109,082	109,082	Oa-BF	IM-1287
Karl Brugmann Sand & Gravel, Inc. 8420 Weaver Rd. Ravenna, OH 44266 330-626-3914 Donald H. Brugmann, owner	Karl Brugmann Sand & Gravel, Inc. (257)	Portage	sand & gravel	304,388	304,388	Pe-15	IM-104
Oscar Brügmann Sand & Gravel, Inc. 3828 Dudley Rd. Mantua, OH 44255 330-274-8224 Roy Brugmann, pres.	Oscar Brugmann Sand & Gravel, Inc. (258) (70) Oscar Brugmann Sand & Gravel, Inc. (628)	Portage Portage	sand & gravel sandstone sand & gravel	585,320 52,615	635,000 65,000	Pe-9 Pe-OB	IM-119 IM-1241
Brush Wellman, Inc. 14710 W. Portage River South Rd. Elmore, OH 43416-9502 419-862-2745 John Cayton, environ. engineer	Brush Wellman Clay Mine (136)	Ottawa	clay			Oa-19	IM-1153
Buckeye Excavating Development, Inc. 10718 Old Lincoln Way P.O. Box 102 Orrville, OH 44667 330-857-7665 Steven R. Steiner, partner	Steiner Pit (535)	Wayne	sand & gravel	20,335	20,335	We-23	IM-1136
Buckeye-Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 330-337-9511 John C. Grisham, pres.	West Point (178) West Point (192) (186) (186) Clapper (146) (146) Close (200) (200) Robertsville (189) (189)	Columbiana Columbiana Stark Stark Stark	clay limestone clay shale clay shale clay shale clay shale	1,829 1,219 3,566 30	1,829 1,219 3,566 30	Ca-987 Ca-BIM Sk-247 Sk-B Sk-BI	D-0928 IM-1271 D-0929 D-1123 D-1043

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
James Bunnell, Inc. 5730 State Route 128 Cleves, OH 45002 513-353-1100 Jack Ernst, pres.	James Bunnell, Inc. (123) James Bunnell, Inc. (124) James Bunnell, Inc. (519)	Hamilton Hamilton Hamilton	sand & gravel sand & gravel sand & gravel	6,544 848,163	6,544 848,163	Hmn-50 Hmn-59 Hmn-B	IM-205 IM-812, IM-815 IM-1139
Burlington Sand & Gravel Co. P.O. Box 399 Chesapeake, OH 45619 740-894-5978 Vernon E. Collier, owner	Willow Creek (170)	Lawrence	sand & gravel			Le-426	IM-856
C & S Contractors, Inc. P.O. Box 42459 Cincinnati, OH 45242 513-530-9844 Raymond A. Conn, pres.	C & S Contractors, Inc. (356)	Warren	sand & gravel			Wan-47	IM-846
C.I.R., Inc. 2856 N. County Line Rd. Geneva, OH 44041-9604 440-352-2256 Louis W. Pirc, pres.	Harmon (625)	Lake	sand & gravel	3,433	3,433	Lke-CIR	IM-1243
Canton Aggregate Div. of Central Allied Enterprises, Inc. P.O. Box 80449 Canton, OH 44708-0449 330-477-6751 John A. Woodhall, Jr., pres.	Massillon Pit (325) Canton Aggregate (318) Canton Aggregate (319) Canton Aggregate (631) Massillon Pit (578)	Stark Stark Stark Stark Stark	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	2,000 754,185 754,185 72,007 337,844	2,000 754,185 754,185 72,007 337,844	Sk-607 Sk-681 Sk-689 Sk-CA Sk-MW	IM-102 IM-164 IM-173 IM-1234 IM-1171
Cargill Incorporated Cargill Salt Division P.O. Box 6920 Cleveland, OH 44101 216-651-7200 Charles Sullivan, pres.	Cleveland Mine (1) Cargill Incorporated (4)	Cuyahoga Summit	salt salt	973,287 276,160	1,053,714 258,704	Cya-30 ³ St-9127	
Joe E. Carter 21399 State Line Rd. Lawrenceburg, IN 47025 812-537-3970 Joe E. Carter, owner	Lost Bridge (642)	Hamilton	sand & gravel	200	400	Hmn-JC	IM-1267
Carter & Carter, Inc. P.O. Box 266 Miamisburg, OH 45343-0266 937-239-0554 Charles V. Carter, pres.	Carter & Carter, Inc. (561) (157)	Montgomery	sand & gravel clay	1,556	1,556	My-CW	IM-878
Cashen, Inc. 1225 Dock Rd. Madison, OH 44057 216-428-1148 Andy Cashen, owner	Cashen Pit (597)	Lake	sand & gravel			Lke-C	IM-1215
Cedar Heights Clay Co. Div. of Resco Products, Inc. P.O. Box 295 Oak Hill, OH 45656-0295 740-682-7794 William T. Tredennick, pres.	Sadler (145) Harrison (195)	Jackson Jackson	clay clay	1,189 54,589	1,189 54,589	Jkn-CH1 Jkn-CH2	IM-1182 IM-1302
Celotex Corp. P.O. Box 280 Port Clinton, OH 43452 419-734-3153 Larry Schultz, plant manager	American #2 (1)	Ottawa	gypsum	264,154	264,154	Oa-2	IM-344
Center West Enterprise, Inc. 1544 N. Main St. Niles, OH 44446 330-544-0890 Andrew Basil Polivka, pres.	Center West Enterprise, Inc. (611)	Trumbull	sand & gravel			TI-C	IM-1190
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732-0098 740-962-2013 Charles A. Ebetino, Jr., pres.	Horse Run Stone Quarry (73) Windy Hill (166)	Morgan Noble	limestone limestone	51,623	51,623	Mon-600 NE-C	D-1034 D-0820

³This mine was operated January through April 1997 by Akzo Nobel Salt, Inc. and May through December 1997 by Cargill Incorporated.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Chambers Development of Ohio, Inc. 310 Leger Rd. N. Huntingdon, PA 15642 412-861-8730 Alexander Rangos, v. pres.	Harrison County Landfill (188) (188)	Harrison	clay shale			Hn-CD	D-1105
Charlestown Sand & Gravel, Inc. 7845 State Route 5 Ravenna, OH 44266 330-296-9233 Yale Stuble, pres.	Charlestown Sand & Gravel, Inc. (259)	Portage	sand & gravel			Pe-17	IM-123
Chesterhill Stone Co. 773 East State Rte. 60 NE P.O. Box 599 McConnelsville, OH 43756 740-962-5621 Fred R. Price, pres.	Buck Farm (240) Graham Farm (563) East Fultonham (75) Willow Island (675)	Morgan Morgan Muskingum Washington	sand & gravel sand & gravel limestone sand & gravel	199,459 676,496	198,929 726,320	Mon-588 Mon-CSC Mum-106 Wn-C	IM-35 IM-1178 IM-297 IM-1315
Chesterville Sand & Gravel Co., Inc. State Route 95 E P.O. Box 51 Chesterville, OH 43317 419-768-3369 Carrol D. Gleason, pres.	Chesterville Sand & Gravel Co., Inc. (242)	Morrow	sand & gravel	167,045	167,045	Mw-10	IM-258
Christman Quarry 47278 Swazey Rd. Lewisville, OH 43754 740-838-2475 Gerald L. Christman, owner	Christman Quarry (163)	Monroe	limestone	89,978	89,978	Me-C	IM-1088
Clark Clay Co. 6918 Township Rd. 310 Millersburg, OH 44654 330-674-5150 Dwight S. Clark, owner	Clark Clay Co. (17)	Holmes	clay	4,962	4,962	Hs-56	
Clemson Excavating, Inc. 9954 Old State Rd. Chardon, OH 44024 440-474-9608 Bill Clemson, pres.	Clemson (635)	Ashtabula	sand & gravel	69,777	69,777	Asa-C	IM-1278
Cleveland Quarries P.O. Box 261 Amherst, OH 44001-0261 440-986-4501 David Tyrrell, pres.	Birmingham Quarry (14) Amherst Quarries (27)	Erie Lorain	sandstone sandstone	1,624 2,546	1,624 2,546	Ee-21 Ln-3	IM-416 IM-415
Clinton Stone, Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Bonny Huffman, pres.	Sands Hill (124)	Vinton	limestone			Vn-174	D-0309
M. J. Coates Construction Co. P.O. Box 231 Centerville, OH 45459 937-862-4655 Martin J. Coates, owner	M. J. Coates Construction Co. (548)	Greene	sand & gravel	70,081	70,081	Ge-47	IM-751
Cochran Transportation Services, Inc. P.O. Box 578 Athens, OH 45701 740-593-3906 Charles W. Cochran, pres.	Cochran Transportation Services, Inc. (458) (87)	Athens	sand & gravel clay	28,682 108	28,682 108	As-595	IM-1083
Boone Coleman Construction, Inc. Route 5 Box 292 West Portsmouth, OH 45662 740-858-6661 Boone Coleman, pres.	Coleman Pit (576) Boone Coleman Construction, Inc. (73)	Scioto Scioto	sand & gravel sandstone	600	600	So-B So-BC	IM-705 IM-1252
Bill D. Colwell 5019 College Corner Pike P.O. Box 300 Oxford, OH 45056 513-523-3128 Bill D. Colwell, owner	Sipps Lane (28)	Butler	sand & gravel	20,776	20,776	Br-36	IM-649

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Complete Resources Co. 1275 E. Fifth Ave. Columbus, OH 43219 614-253-6415 Lee Guzzo, owner	Darby Materials Plant #5 (648)	Pickaway	sand & gravel	164,470	181,007	Fn-C	IM-1265
Con-Ag, Inc. 16672 County Rd. 66A North St. Marys, OH 45885 419-394-8870 Robert E. Hirschfeld, pres.	Con-Ag, Inc. (10)	Auglaize	limestone	236,738	268,378	Ae-31	IM-744
County Line Concrete & Supply Co. P.O. Box 176 Gnaddenhutten, OH 44629 419-891-3010 Mike Uhl, pres.	WS&G Coshocton pit (668)	Coshocton	sand & gravel	111,895	320,416	Cn-C	IM-1311
Craigton Shale Co. 2880 E. Easton Rd. Creston, OH 44217 330-435-6535 Lenny Schemrich, owner	Lakeville Sand & Gravel (670) Craigton Shale Co.(165)	Holmes Wayne	sand & gravel shale	6,774 8,863	6,774 8,863	Hs-C We-25	IM-1303 IM-1209
Cremeans Concrete & Supply Georges Creek Rd. P.O. Box 475 Gallipolis, OH 45631 740-446-1142 Frank A. Cremeans, pres.	Kanauga Pit (440)	Gallia	sand & gravel	2,130	2,130	Ga-626	IM-1046
Crosby Gravel 9570 State Route 128 Harrison, OH 45030 513-738-0077 Joseph Prus, pres.	Crosby Gravel (121)	Hamilton	sand & gravel	470	470	Hmn-44	IM-120
R. A. Cruise Sand & Gravel, Inc. 7639 State Route 14 Ravenna, OH 44266 330-296-4087 Larry R. Cruise, pres.	R. A. Cruise Sand & Gravel, Inc. (261)	Portage	sand & gravel	56,295	56,296	Pe-45	IM-139
Cunningham Asphalt Paving, Inc. P.O. Box 370 Wheelersburg, OH 45694 740-574-6184 Karl Cunningham, pres.	Cunningham Pit (304)	Scioto	sand & gravel			So-83	IM-211
Custar Stone Co. P.O. Box 629 Napoleon, OH 43545 419-533-8831 Brent Gerkin, pres.	Custar (129)	Wood	limestone	474,645	484,137	Wd-5	IM-473
D. & D. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 330-549-3127 Donald Thompson, pres.	D. & D. Strip (130) D. & D. Strip (57) (164)	Columbiana Columbiana	clay sandstone shale	24,906	24,906	Ca-348 Ca-888	IM-976 IM-1181
D & K Materials, Inc. 3141 Congress Lake Rd. Mogadore, OH 44260 330-678-2411 Kim Ebie, pres.	D & K Materials, Inc. (568) (199)	Portage	sand & gravel clay	30,218	30,218	Pe-101	IM-1154
D & W Sand & Gravel 10677 Wren Rd. Mechanicsburg, OH 43044 937-834-2548 Dale Potter, owner	D & W Sand & Gravel (49)	Champaign	sand & gravel			Cpn-21	IM-616
D.G.M., Inc. 453 Salisbury Rd. Beaver, OH 45613 740-820-3145 Thomas Salisbury, pres.	Tow Path Ready Mix (664)	Scioto	sand & gravel	6,778	6,778	So-DGM	IM-1280

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Darby Creek Excavating 6790 Brooksmiller Rd. Circleville, OH 43113 740-477-8600 Kevin R. Steward, pres.	Darby Creek Excavating (671)	Pickaway	sand & gravel	0	5,000	Pky-DC	IM-1316
Davon Inc. 4281 Roush Rd. Hillsboro, OH 45133 937-364-2311 John B. Patton, pres.	Plum Run (1) Eagle Crushed Stone (184) Highland Stone (41) Chattin Pit (253) Piketon (255)	Adams Brown Highland Pike Pike	limestone limestone limestone sand & gravel sand & gravel	2,730,995 571,480 928,991 692,518	2,802,628 585,569 972,199 662,974	Ads-1 Bn-EC Hd-2 Pke-23 Pke-24	IM-237 IM-1195 IM-230 IM-242 IM-222
De Milta Sand & Gravel, Inc. 921 Erie Rd. Eastlake, OH 44095 440-942-2015 Nick De Milta, pres.	De Milta Sand & Gravel, Inc. (598)	Lake	sand & gravel			Lke-D	IM-1187
Demmy Construction, Inc. 4324 Fairfield Pike Springfield, OH 45502 937-325-9429 Daniel E. Demmy, pres.	Pit II (385)	Clark	sand & gravel	45,983	45,983	Ck-501	IM-340
Demmy Sand & Gravel 4324 Fairfield Pike Springfield, OH 45502 937-325-8840 Woodrow Demmy, owner	Demmy Sand & Gravel (54)	Clark	sand & gravel	5,932	5,932	Ck-502	IM-375
Dennis Clay Co. 11123 State Route 37 East New Lexington, OH 43764 740-342-5473 Tom L. Dennis, owner	Ohio Power (124) (124) Baker (176) (176) Co. Rd. 7 (108) (108) Nelson/Butler (205) (205) Snake Hollow (67) (159)	Muskingum Muskingum Perry Perry Perry	clay shale clay shale clay shale sandstone clay	8,000 25,717 37,263 14,057 2,092	8,000 25,717 37,263 14,057 2,092	Mum-903 Mum-DCC Py-338 Py-D1 Py-DCC	IM-1115 IM-1220 IM-1092, IM-1134 IM-1304 IM-1192
A. J. Diana Sons, Inc. 1916 Erie Ave. NW P.O. Box 488 Massillon, OH 44648 330-832-5904 Virgil V. Diana, pres.	Neidert Pit (320)	Stark	sand & gravel	8,000	10,000	Sk-694	IM-858
Dingledine Basic Materials, Inc. 2304 Somerville Rd. P.O. Box 86 Somerville, OH 45064 513-726-5258 Gerald Dingledine, owner	Dingledine Basic Materials, Inc. (32)	Butler	sand & gravel	81,789	81,789	Br-50	IM-739
Dome Minerals, Inc. 15601 Emerick Rd. Kensington, OH 44427 330-223-1413 Fred A. Rogers, pres.	Dome Minerals, Inc. (79)	Columbiana	shale	18,458	18,458	Ca-947	IM-935
Don's Dozer Service, Inc. 8200 Seasons Rd. Streetsboro, OH 44241 216-626-5147 Donald R. McElravy, pres.	Don's Dozer Service, Inc. (529)	Portage	sand & gravel	2,407	2,407	Pe-96	IM-792
James E. Downard 1185 Zwingli Rd. Bremen, OH 43107 740-569-7849 James E. Downard, owner	Downard Pit (541) (155)	Fairfield	sand & gravel clay	248 91	248 91	Fd-16	IM-1156
C. E. Duff & Son, Inc. 9042 State Route 117 P.O. Box 305 Huntsville, OH 43324-0305 937-686-2488 James E. Duff, pres.	Forest Quarry (156) Portable (444) C. E. Duff & Son, Inc. (50) Duff Sand Co. (182) Bellefontaine (420) Lewistown (183)	Hardin Logan Logan Logan Logan Logan	limestone sand & gravel limestone sand & gravel sand & gravel sand & gravel	22,952 396 381,669 67,927 72,940	22,952 396 381,669 67,927 72,940	Hdn-S Lgn-12 Lgn-15 Lgn-31 Lgn-36 Lgn-39	IM-1034 IM-1071 IM-453 IM-454 IM-1007 IM-887

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
E. A. Construction, Inc. 7013 S. Funk Rd. Shreve, OH 44676 330-496-2531 Ellis Aylesworth, pres.	#1 (613) #1 (74) (185)	Wayne Wayne	sand & gravel sandstone clay	3,650 24,462 1,764	3,650 24,462 1,764	We-24 We-EA	IM-1211 IM-1259
ENZ, Inc. P.O. Box 405 Magnolia, OH 44643 330-866-4510 James R. Demuth, pres.	Sickafoose-Fox Pit (205) (203) (203)	Stark	limestone clay shale	113,815 1,062 176	113,815 1,062 176	Sk-208	D-1015, D-1144
ESSROC Cement Corp. P.O. Box 779 Bessemer, PA 16112 724-667-7702 Robert Rayner, pres.	Bessemer Pit (57) (34) Carbon Pit (162) (107) (107)	Mahoning Mahoning	limestone clay limestone clay shale	189,855 1,631,810 105,988	189,855 1,631,810 105,988	Mg-608 Mg-EM	IM-4 IM-1056
Eagle Contracting 195 Union St., SU A2 Newark, OH 43055 740-345-1980 Douglas E. Mill, pres.	Alexandria Pit (600)	Licking	sand & gravel			Lg-W	IM-1213
East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452 330-549-2165 R. E. Mackall, pres.	Withers-Petersburg (171) (602) (53) (118)	Mahoning	limestone sand & gravel sandstone clay	372,991	372,991	Mg-631	IM-1103
Eaton Sand & Gravel Co. 11641 Mosteller Rd. Cincinnati, OH 45241 606-331-2303 Charles Bucklew, pres.	Cleves Gravel Pit (132)	Hamilton	sand & gravel			Hmn-46	IM-396
R. A. Eberts Co., Inc. P.O. Box 109 Jackson, OH 45640 740-286-2975 Phil A. Bowman, pres.	Diamond Stone (9) (128)	Athens	limestone clay	257,405 4,967	257,405 4,967	As-533	IM-17
David E. Edgington P.O. Box 282 Frankfort, OH 45628 740-998-5328 David E. Edgington, owner	Edgington Pit (573)	Ross	sand & gravel	2,656	2,656	Rs-E	IM-1168
Elm Spring Farm 938 State Route 207 Chillicothe, OH 45601 740-775-5525 Joanna J. Haskins, owner	Elm Spring Farm (297)	Ross	sand & gravel			Rs-26	IM-922
Embro, Inc. 8320 North State Route 123 Franklin, OH 45005 513-746-6121 Ronald Martz, pres.	Embro, Inc. (589)	Warren	sand & gravel	103,852	103,852	Wan-7	IM-151
Enon Washed Sand & Gravel Co. 1665 Enon Rd. P.O. Box 363 Enon, OH 45323 513-651-5000 John Steele, Jr., pres.	Enon Washed Sand & Gravel Co. (57)	Clark	sand & gravel	295,922	295,255	Ck-3	IM-463
Erie Blacktop, Inc. 4507 Tiffin Ave. P.O. Box 2308 Sandusky, OH 44870 419-625-7374 Dean Wikel, pres.	Erie Blacktop Quarry (24) (637) Erie Blacktop Sand & Gravel Pit (417)	Erie Huron	limestone sand & gravel sand & gravel	133,970 60	133,970 60	Ee-27 Hrn-16	IM-608 IM-975
Erie Materials, Inc. 4507 Tiffin Ave. Sandusky, OH 44870 419-625-7374 Dean Wikel, pres.	Erie Materials, Inc. (83)	Erie	sand & gravel	425	0	Ee-18	IM-676

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Erie Sand & Gravel Co. P.O. Box 179 Erie, PA 16512-0179 814-453-6721 Sidney E. Smith, Jr., pres.	Erie Sand & Gravel Co. (1)	Lake Erie	sand & gravel	16,922	16,922	Ee-dredge	
Feikert Sand & Gravel, Inc. 6971 County Rd. 189 Millersburg, OH 44654 330-674-0038 Lynn O. Feikert, pres.	Feikert Sand & Gravel, Inc. (154)	Holmes	sand & gravel	136,207	136,207	Hs-511	IM-1048, IM-1240
Fenner Sand & Gravel, Inc. 7131 W. Fenner Rd. Ludlow Falls, OH 45339 937-698-7048 Robert P. Sneed, pres.	Woodville Concrete Corp. (222)	Miami	sand & gravel	104,000	104,000	Mi-4	IM-472
Fleckenstein Farm Gravel Pit 11251 State Route 66 Minster, OH 45865 937-295-2417 Ferd J. Fleckenstein, owner	Fleckenstein Farm Gravel Pit (310)	Shelby	sand & gravel			Shy-12	IM-528
Fleming Construction Co., Inc. dba Scioto Sand and Gravel P.O. Box 31 Marion, OH 43301-0031 740-494-2177 Gerald E. Fleming, pres.	Pit #1 (197) Pit #2 (423)	Marion Marion	sand & gravel sand & gravel	2,900 11,540	2,949 11,540	Mn-16 Mn-19	IM-171 IM-990
Flesher Sand & Gravel, Inc. 3322 Clark Mill Rd. Norton, OH 44203 330-745-9239 James E. Flesher, pres.	Flesher Sand & Gravel, Inc. (327)	Summit	sand & gravel	4,146	4,146	St-52	IM-900
David L. Florence 1617 Staunton Ave. Parkersburg, WV 26101 740-374-0272 David L. Florence, owner	Florence Pit (163)	Washington	clay			Wn-F	IM-1208
Foureman's Sand & Gravel, Inc. 2791 Wildcat Rd. Greenville, OH 45331 937-548-1718 Gary B. Foureman, pres.	Foureman's Sand & Gravel, Inc. (80)	Darke	sand & gravel	74,156	74,156	Dke-4	IM-433
Fox Stone Products, Inc. P.O. Box 299 Put-In-Bay, OH 43456 419-285-3025 Richard H. Fox, owner	Fox Stone Products, Inc. (180)	Ottawa	limestone			Oa-18	IM-635
Friendsville Sand, L.P. 9601 Avon Lake Rd. Lodi, OH 44254 330-948-2610 Richard L. Rothel, pres.	Friendsville Sand, L.P. (558)	Medina	sand & gravel	36,146	36,146	Ma-23	IM-1177
Lloyd B. Fry P.O. Box 1515 Piqua, OH 45356 937-773-1941 Lloyd B. Fry, pres.	Lloyd B. Fry (390)	Miami	sand & gravel			Mi-T	IM-696
Frye Sand & Gravel, Inc. 3049 S. Denmark Rd. P.O. Box 3 Dorset, OH 44032 440-858-2627 Harold L. Frye, owner	Frye Sand & Gravel, Inc. Pit (9) Frye Sand & Gravel, Inc. Pit (650)	Ashtabula Ashtabula	sand & gravel sand & gravel	2,107	2,107	Asa-10 Asa-F	IM-198 IM-1289
Ganges Gravel Co. P.O. Box 638 Mansfield, OH 44901 419-525-2656 Don Daugherty, owner	Ganges Gravel Co. (289)	Richland	sand & gravel	28,389	28,389	Rd-18	IM-670

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
John L. Garber Materials, Inc. Route 8 Lexington, OH 44904 419-884-1567 John L. Garber, pres.	John L. Garber Materials, Inc. (290)	Richland	sand & gravel	298,356	298,356	Rd-14	IM-436
Al Gasser Excavating, Inc. 1308 Gasser Rd. NW Dover, OH 44622 330-343-9407 Al Gasser, pres.	Gasser Pit (587)	Tuscarawas	sand & gravel	2,500	2,500	Ts-2049	IM-1151
General Clay Products Corp. 1445 W. Goodale Blvd. Columbus, OH 43212 614-486-0614 Harold B. Epler, Jr., pres.	Drescher Pit (6)	Coshocton	clay	650	650	Cn-787	IM-610
	(6)		shale				
	General Clay-Logan Pit (12)	Hocking	clay	20,521	20,521	Hg-205	IM-21
	(12)		shale				
	General Clay-Diamond Pit (110)	Hocking	clay	20,521	20,521	Hg-330	IM-1013
GenLime Group, L.P. P.O. Box 158 Genoa, OH 43430 419-855-8336 P. J. Senechal, pres.	(110)		shale	14,309	14,309		
	Troyer Pit (18)	Holmes	shale	17,407	17,407	Hs-77	IM-545
	General Clay Products Pit #5 (37)	Medina	shale			Ma-6	IM-455
	Plant #7 (73)	Wyandot	clay			Wt-7	IM-407
	GenLime Group, L.P. (85)	Ottawa	limestone	1,240,935	1,377,662	Oa-1	IM-292
Glen-Gery Corp. P.O. Box 398 Caledonia, OH 43314 419-845-3321 Steve Matsick, pres.	Iberia Quarry (36)	Marion	shale	207,096	207,096	Mn-7	IM-309
Golden Crescent Construction, Inc. 1104 Milan Ave. Amherst, OH 44001 440-967-6822 Samuel T. Bartlett, pres.	Golden Crescent Construction, Inc. (66)	Lorain	sandstone			Ln-14	IM-1205
Golsch Construction, Inc. 9880 Valley Junction Rd. Cleves, OH 45002 513-353-2555 Gary Golsch, pres.	Golsch (641)	Hamilton	sand & gravel			Hmn-G	IM-1270
Joyce A. Good 1203 Kieffer St. Wooster, OH 44691 330-264-6803 Joyce A. Good, owner	Joyce A. Good (508)	Ashland	sand & gravel	5,571	0	Ald-G	IM-1121
Good Builders 35280 Linton Rd. Logan, OH 43138 740-385-5872 Steve Good, owner	Good Builders (596)	Hocking	sand & gravel			Hg-G	IM-1201
	(171)		clay				
Goshen Sand & Gravel 1012 Commercial Ave. SE New Philadelphia, OH 44663 330-339-3339 Ben Cookson, Jr., pres.	Goshen Sand & Gravel (389)	Tuscarawas	sand & gravel	58,123	70,223	Ts-1976	IM-942, IM-1235
Gottron Bros. Co. 100 South Stone St. Fremont, OH 43420 419-332-5281 Thomas R. Gottron, pres.	Gottron Bros. Co. (101)	Sandusky	limestone	89,338	85,257	Sy-5	IM-259
James D. Graham 2036 State Route 725 Spring Valley, OH 45370 937-862-4655 James D. Graham, owner	Graham Pit (550)	Greene	sand & gravel	101,317	101,317	Ge-G	IM-655
The Gravel Co. 325 Clark Rd. P.O. Box 15501 Cincinnati, OH 45215 513-761-4980 Roy B. Schweitzer, pres.	New Miami Pit (42)	Butler	sand & gravel			Br-3	IM-719
	Cleves (141)	Hamilton	sand & gravel			Hmn-28	IM-353

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Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Green Basin Coal, Inc. 8758 Fort Laurens Rd. NW Strasburg, OH 44680 330-878-7740 John Limbacher, pres.	Blackhawk (169) (63) (103) (103)	Tuscarawas	limestone sandstone clay shale			Ts-2024	IM-1087
Green Oaks Potting Products, Inc. 2222 Lake Rockwell Rd. P.O. Box 979 Ravenna, OH 44266 330-296-2157 John Lyon, pres.	Green Oaks (451) (161) (7)	Portage	sand & gravel clay peat	103 35 644	103 35 644	Pe-89	IM-1142
H. T. Griffin Excavating, Inc. 3950 S. Berkey Southern Swanton, OH 43558 419-826-0230 Henry T. Griffin, owner	H. T. Griffin Excavating, Inc. (472)	Lucas	sand & gravel			Ls-G	IM-1090
Grimes Excavating Route 3 Box 121 New Matamoras, OH 45767 740-865-2267 Lewis Grimes, owner	Grimes Excavating (533)	Washington	sand & gravel	127,000	127,000	Wn-1008	IM-1111
Gwin Contracting Co. P.O. Box 205 Columbiana, OH 44408 330-482-2442 Lyle D. Gwin, pres.	Gwin Contracting Co. (30)	Mahoning	sandstone			Mg-62	IM-599
J. M. Hamilton & Sons Co., Inc. 1974 Marion-Bucyrus Rd. Marion, OH 43302 614-382-2189 O. E. & A. M. Hamilton, owners	J. M. Hamilton & Sons Co., Inc. (59)	Marion	limestone	132,310	132,310	Mn-2	IM-423
Hardin Quarry Co., Inc. 12484 State Route 701 Kenton, OH 43326 419-675-1327 Richard W. Pees, pres.	Hardin Quarry Co., Inc. (38)	Hardin	limestone	276,555	276,555	Hdn-2	IM-443
Norman Harpster 16069 State Route 235 Belle Center, OH 43310 937-464-5623 Norman Harpster, owner	Harpster Pit (553)	Hardin	sand & gravel			Hdn-H	IM-864
Harrison Sand & Gravel Co. 10980 Campbell Rd. Harrison, OH 45030 513-367-5174 Donald Gauck, v. pres.	Harrison Sand & Gravel Co. (135)	Hamilton	sand & gravel	81,474	86,090	Hmn-17	IM-295
Haubeil & Sons Asphalt & Materials, Inc. 379 Seney Rd. Chillicothe, OH 45601 740-773-6358 George Haubeil, pres.	Haubeil & Sons Asphalt & Materials, Inc. (491)	Ross	sand & gravel	114,461	114,461	Rs-H	IM-1052
Haueter Sand & Gravel, Inc. P.O. Box 206 Chardon, OH 44024 440-286-9482 Donald H. Haueter, pres.	Haueter Sand & Gravel, Inc. (108) Haueter Sand & Gravel, Inc. (545)	Geauga Geauga	sand & gravel sand & gravel	271,608	271,608	Gea-29 Gea-H	IM-215 IM-510
Heer Excavating, Inc. 7381 State Route 66 Archbold, OH 43502 419-445-3415 Daniel E. Heer, pres.	Mason Pit (634)	Williams	sand & gravel	10,204	10,204	Ws-22	IM-1222
Heiser Sand & Gravel Co. P.O. Box 2491 North Canton, OH 44720 330-499-8201 Richard L. Heiser, owner	Heiser Sand & Gravel Co. (608) Heiser Sand & Gravel Co. (609)	Stark Stark	sand & gravel sand & gravel	47,170	47,170	Sk-HS Sk-HS1	IM-1193 IM-1203

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Hidden Harbour Partners 6725 West Central Ave. Toledo, OH 43617 419-841-2980 Robert Dame/Richard Moses, partners	Hidden Harbour Partners (645)	Lucas	sand & gravel			Ls-H1	IM-1277
Hillsdale Sand & Gravel, Inc. P.O. Box 223 Archbold, OH 43502 419-445-1015 Dean Miller, pres.	Hillsdale Sand & Gravel, Inc. (82)	Defiance	sand & gravel			De-2	IM-765
Hilltop Aggregate, Inc. P.O. Box 362 Mogadore, OH 44260 330-628-4000 Robert W. West, pres.	Hilltop Aggregate, Inc. (262)	Portage	sand & gravel	362,503	362,503	Pe-56	IM-127
Hilltop Basic Resources, Inc. One West Fourth St., Suite 1100 Cincinnati, OH 45202-3615 513-651-5000 John Steele, Jr., pres.	Fairborn Aggregate Plant (112)	Clark, Greene	sand & gravel	662,176	662,286	Ge-4	IM-394
	West Carrollton Aggregate Plant (232)	Montgomery	sand & gravel	851,843	657,396	My-19	IM-401, IM-916
Hocking Valley Concrete, Inc. 35255 Hocking Dr. Logan, OH 43138 740-385-2165 Mark Vaughn, pres.	Hocking Valley Concrete, Inc. (151)	Hocking	sand & gravel	84,524	90,000	Hg-262	IM-41
Hocking Valley Mulch 32091 Beech Camp Rd. Logan, OH 43138 740-385-6744 David E. Sheets, Jr., partner	Sheets Pit (657)	Hocking	sand & gravel	2,652	2,652	Hg-HV	IM-1284
William A. Hoffman, Jr. 25043 State Route 104 Circleville, OH 43113 740-474-2002 William A. Hoffman, Jr., owner	Hoffman Pit (480)	Pickaway	sand & gravel	3,491	3,491	Pky-H	IM-1039
Hollinger Excavating 2097 Hollansburg-Arcanum Rd. New Madison, OH 45346 937-996-5381 Tom W. Hollinger, leasee	Hollinger Gravel (81)	Darke	sand & gravel	1,794	1,794	Dke-10	IM-326
Holloway Sand & Gravel Co., Inc. P.O. Box 456 Aberdeen, OH 45101-0456 937-544-5524 Dan Holloway, pres.	Holloway Sand & Gravel Co., Inc. (173)	Adams	limestone			Ads-H	IM-805
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 330-893-2721 Merle Mullet, pres.	241 Plant (44) (19) (19)	Holmes	limestone clay shale	30,917 4,627 26,650	30,917 4,627 26,650	Hs-67	IM-3, IM-768
	Bolivar Mine (76) L & M Rainsberg (151)	Stark Tuscarawas	clay shale	26,919 62,593	26,919 62,593	Sk-235 Ts-H1	D-865 IM-927
Honey Creek Stone Co. P.O. Box 286 Petersburg, OH 44454 330-542-2372 Carmen Shick, pres.	Honey Creek Stone Co. (56)	Mahoning	limestone	277,784	353,948	Mg-54	IM-93
Hugo Sand Co. 7055 State Route 43 Kent, OH 44240 216-587-2700 Dorothy M. Strohm, pres.	Hugo Sand Co. (264)	Portage	sand & gravel	210,721	210,721	Pe-10	IM-138
Hydraulic Press Brick Co. 8900 Hemlock Rd. P.O. Box 31330 Independence, OH 44131 216-524-2950 W. W. Allen, Jr., pres.	Hydraulic Press Brick Co.(7)	Cuyahoga	shale	240,080	240,080	Cya-19	IM-95

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Inland South Aggregates 51778 Darlington Rd. Negley, OH 44441 330-426-6733 Lorraine Holloway, pres.	Inland South Aggregates (539)	Columbiana	sand & gravel	71,213	80,213	Ca-351	IM-634
JP Sand & Gravel Co. 5911 Lockbourne Rd. P.O. Box 2 Lockbourne, OH 43137 614-497-0083 Richard A. Roberts, pres.	JP Sand & Gravel Co. (98)	Franklin	sand & gravel	439,663	439,663	Fn-52	IM-191
Glen James & Sons, Inc. 3930 Boggs Rd. Zanesville, OH 43701 740-454-1522 Glen James, pres.	Glen James & Sons, Inc. (626)	Muskingum	sand & gravel			Mum-J	IM-1229
Janson's Soil Service, Inc. 1492 Mechanicsville Rd. Rock Creek, OH 44084 440-466-3835 Peter E. Janson III, pres.	Janson's Soil Service, Inc. (10) (82) (82)	Ashtabula	sand & gravel clay shale			Asa-14	IM-563
Jarrett Sand Co. 6505 Skadden Rd. Sandusky, OH 44870 419-359-1750 James Jarrett, owner	Jarrett Sand Co. (84)	Erie	sand & gravel	3,290	3,290	Ee-29	
Jaymar, Inc. 8751 North State Route 7 Cheshire, OH 45620 740-992-6637 Jay Hall, Jr., pres.	Jaymar, Inc. (544)	Gallia	sand & gravel	193,358	193,358	Ga-J	IM-1145
Jefferson Materials Co. 8505 State Route 14 Streetsboro, OH 44241 330-626-3816 Charles Rauh, pres.	Howitt (265)	Portage	sand & gravel	364,700	376,900	Pe-63	IM-82
Johnson Road Sand & Gravel 510 Johnson Rd. Kent, OH 44240 330-673-3396 Robert K. Heimann, pres.	Johnson Road Sand & Gravel (615)	Portage	sand & gravel			Pe-98	IM-1231
Johnson Stone Products, Inc. 202 State St. P.O. Box 39 Kipton, OH 44049 440-774-1601 Terry A. Johnson, pres.	Kipton Quarry (75)	Lorain	sandstone	207,867	247,320	Ln-J	IM-1300
Joseph Sand & Gravel, Inc. 16272 Boundary Rd. Wapakoneta, OH 45895 419-568-3787 Mary J. Joseph, owner	Joseph Sand & Gravel, Inc. (23)	Auglaize	sand & gravel	806	806	Ae-23	IM-508
K.C.C.I. P.O. Box 24 Morristown, OH 43759 740-782-1087 George Krulock, pres.	Apex (176)	Harrison, Jefferson	limestone	97,576	97,576	Jfn-K	IM-1164
Keener Sand & Clay Co. 330 Dering Ave. Columbus, OH 43207 614-444-1105 Carl F. Weiffenbach, pres.	Huron Plant (85)	Erie	sand & gravel	597	597	Ee-5	
Keeney Sand & Stone, Inc. 13320 Girdled Rd. Painesville, OH 44077 440-254-4582 Dennis Keeney, pres.	Keeney Sand & Stone, Inc. (60)	Lake	sandstone	72,807	72,807	Lke-K	IM-859

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Kellstone, Inc. P.O. Box 391 Kelleys Island, OH 43430 216-883-7200 James A. Palladino, pres.	Kellstone, Inc. (174)	Erie	limestone	1,118,000	1,118,000	Ee-K	IM-727
Kilbarger Construction, Inc. P.O. Box 946 Logan, OH 43138 740-385-6019 Edward Kilbarger, pres.	Kilbarger Gravel Pit (523)	Hocking	sand & gravel	200	200	Hg-329	IM-1112
Kimble Clay & Limestone Co. 3596 State Route 39 NW Dover, OH 44622-9801 330-343-1226 Floyd E. Kimble, owner	Kimble Clay & Limestone Co. (117) (41) (63) (63)	Tuscarawas	limestone sandstone clay shale	82,596 20,424 61,432 183	82,596 20,424 61,432 183	Ts-1818	IM-9
King Limestone, Inc. 53681 Spencer Rd. Cumberland, OH 43732 740-638-3942 Duane King, pres.	King Limestone, Inc. (147)	Guernsey, Muskingum	limestone	373,733	373,733	Gy-309	IM-1030
King Quarries, Inc. 41499 County Rd. 7 Caldwell, OH 43724 740-732-2923 David King, pres.	King Quarries, Inc. (194) King Quarries, Inc. (197)	Noble Noble	limestone limestone	27,394	27,394	Ne-K Ne-K1	IM-1254 IM-1292
Kinsman Sand & Gravel Co. P.O. Box 79 Kinsman, OH 44428 440-293-5400 Glenn B. Harnett, pres.	Kinsman Sand & Gravel Co. (593)	Ashtabula	sand & gravel	79,755	79,755	Asa-20	IM-1198
Kipp's Gravel Co., Inc. 4987 State Route 222 Batavia, OH 45103 513-732-1024 Melvin M. Kipp, pres.	Kipp's Gravel Co., Inc. (61)	Clermont	sand & gravel	133,128	133,128	Ct-7	IM-432
Kirby's Sand & Gravel, Inc. 4876 County Hwy. 43 Upper Sandusky, OH 43351-9155 419-927-2260 Gene Kirby, owner	Kirby's Sand & Gravel, Inc. (382) Kirby's Sand & Gravel, Inc. (591)	Wyandot Wyandot	sand & gravel sand & gravel	120,804	121,164	Wt-17 Wt-K	IM-604 IM-943
Leonard E. Kleilein 2511 Mansfield-Lucas Rd. Lucas, OH 44843 419-524-2541 Leonard E. Kleilein, owner	Kleilein Pit (629)	Richland	sand & gravel			Rd-K	IM-1232
Knox County Board of Commissioners 110 East High St. Mt. Vernon, OH 43050 740-397-1590 James Henry, engineer	Apple Valley (148)	Knox	shale	873	873	Kx-K	IM-870
Koch Engineering Co., Inc. Knight Division 171 Kelley Ave. Akron, OH 44306 330-724-1277 Allen R. Smalley, mgr.	Koch Engineering Co., Inc. (174)	Stark	clay	886	886	Sk-K	IM-1236
T & K Kuhnle Co. P.O. Box 375 Newbury, OH 44065 330-626-4400 Thomas Kuhnle, pres.	T & K Kuhnle Co. (518)	Geauga	sand & gravel	54,744	54,744	Gea-TK	IM-902
L & I Natural Resources, Inc. 10369 Cones Rd. Loveland, OH 45140 513-683-2045 Jerry Walker, pres.	L & I Pit & Mill (430)	Warren	sand & gravel	165,967	165,967	Wan-50	IM-1006

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L & M Mineral Co. 5205 State Route 39 Millersburg, OH 44654 330-893-2227 John E. Ling, Jr., pres.	Evans et al. (64) Luikert (65) Spring (170) (55) (77) (77)	Tuscarawas Tuscarawas Tuscarawas	shale clay limestone sandstone clay shale	45,918 175 10,500	45,918 175 10,500	Ts-1884 Ts-1914 Ts-1982	IM-6 D-0701 IM-621
Lafarge Corp. Great Lakes Region P.O. Box 160 Paulding, OH 45879 419-399-4861 John Piecuch, pres.	Hicks, Panzer (192) Hardy Salt (588) Paulding Quarry (87) (42)	Tuscarawas Tuscarawas Paulding	 clay sand & gravel limestone clay	 673,472 107,531	 673,472 107,531	Ts-2041 Ts-SI Pg-1	D-1116 IM-569 IM-513
Lafarge Corp. 6715 Tippecanoe Rd. Bldg. C Canfield, OH 44406 330-533-3338 Wayne Lyons, pres.	Marblehead (84) Shalersville (277) Navarre (453)	Ottawa Portage Stark	limestone sand & gravel sand & gravel	4,000,000 908,245 23,014	3,600,000 902,727 30,600	Oa-7 Pe-68 As-1161	IM-440 IM-660, IM-1047, IM-1107, IM-1124 IM-582
Lake Hope Asphalt, Inc. P.O. Box 38 Nelsonville, OH 45764 740-753-1005 Francis Efaw, pres.	Lake Hope Asphalt, Inc. (21)	Athens	sand & gravel	23,014	30,600	As-1161	IM-97
Lakeside Sand & Gravel Co. 3431 Frost Rd. Mantua, OH 44255 330-274-2569 Larry Kotkowski, pres.	Kotkowski Pit (268) Campbell Pit (661)	Portage Portage	sand & gravel sand & gravel	217,849 137,564	217,849 137,564	Pe-40 Pe-LS	IM-190 IM-1293
LaMar Sand & Fill, Ltd. 9090 State Route 73 Hillsboro, OH 45133 937-393-1264 Larry Miller, owner	LaMar Pit (656)	Highland	sand & gravel	2,000	2,000	Hd-L	IM-1297
Latham Limestone, Inc. P.O. Box 77 Latham, OH 45646 740-493-2677 Robert Murray, pres.	Latham Limestone, Inc. (91)	Pike	limestone	374,070	375,800	Pke-13	IM-213
Leetonia Sand & Gravel Co., Inc. P.O. Box 236 Canfield, OH 44406 330-427-1015 Stephen Holowach, pres.	Leetonia Sand & Gravel Co., Inc. (463) (65)	Columbiana	sand & gravel sandstone			Ca-982	IM-1108
Leonard Sand & Gravel 5668 Springdale Rd. Cincinnati, OH 45251 513-741-9124 The Leonard Family, owner	Leonard Sand & Gravel (137)	Hamilton	sand & gravel	0	1,000	Hmn-67	IM-529
Letart Corp. P.O. Box 430 Gallipolis Ferry, WV 25515-0430 304-675-7516 Jon Thompson, pres.	Plant #4 (560) Plant #5 (559)	Meigs Meigs	sand & gravel sand & gravel			Ms-308 Ms-L	IM-1174 IM-1159
Lingvai Peat Co. R.R. 2 01693 Rd. 8 Edgerton, OH 43517 419-298-2058 Ronald Lingvai, owner	Lingvai Peat Co.(4)	Williams	peat	135	0	Ws-17	
Link Trucking Co. 5209 State Route 60 N McConnelsville, OH 43756 740-962-2150 Paul Kussmaul, pres.	Link Trucking Co. (647)	Morgan	sand & gravel	27,019	28,579	Mon-L	IM-1266
Little Miami Sand & Gravel P.O. Box 36 Lebanon, OH 45036 937-233-5555 Paul N. Herdman, pres.	Little Miami Sand & Gravel Co. Plant 2 (429) Little Miami Sand & Gravel Co. Plant 1 (391)	Warren Warren	sand & gravel sand & gravel	2,000 2,000	2,000 2,000	Wan-46 Wan-B	IM-842 IM-679

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Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
London Tile Co. 65 Walnut St. New London, OH 44851 419-929-1551 Sylvia Danison, pres.	Biglow (1)	Ashland	shale	530	530	Ald-1	IM-334
Loxley Aggregates, Inc. 4277 Falls Rd. Lewisburg, OH 45338 937-839-5488 Matthew L. Loxley, pres.	Loxley Aggregates, Inc. (488) (101)	Preble	sand & gravel clay	3,200 2,089	3,200 2,089	Pre-9	IM-1095
Lucky Sand & Gravel Co. 12018 Frost Rd. Mantua, OH 44255 330-562-6196 Bernard Udelson, pres.	Lucky Sand & Gravel Co. (570)	Portage	sand & gravel	90,822	90,822	Pe-L	IM-154
M & J Sand & Gravel, Inc. 130 Fourth St. Parkersburg, WV 26101 304-375-9939 Gale Wilson, pres.	M & J Sand & Gravel, Inc. (590) (152)	Washington	sand & gravel shale	4,907	4,907	Wn-1010	IM-1163
M & M Builders Supply Co. 5820 Carbon Hill Rd. East Palestine, OH 44413 330-426-9958 Hugh Madden, owner	M & M Builders Supply Co. (47) (106) (106)	Columbiana	sandstone clay shale			Ca-970	IM-1024
M. C. Trucking Co. P.O. Box 158 Sabina, OH 45169 937-584-2486 Craig Beam, pres.	M. C. Trucking (199)	Ross	limestone	398,788	398,789	Rs-MC1	IM-1298
Al Mackey Enterprises, Inc. P.O. Box 269 Swanton, OH 43558 419-826-7700 Al Mackey, pres.	Al Mackey Enterprises, Inc. (622) Al Mackey Enterprises, Inc. (639) Mackey Pit (655) 20A Pit (646)	Fulton Fulton Fulton Lucas	sand & gravel sand & gravel sand & gravel sand & gravel	35,812	35,812	Ftn-M Ftn-M1 Ftn-M2 Ls-M	IM-1246 IM-1275 IM-1294 IM-1261
MacRitchie Materials, Inc. P.O. Box 90 West Millgrove, OH 43467 419-288-2790 Donald B. MacRitchie, pres.	MacRitchie Materials, Inc. (130)	Wood	limestone	674,101	680,525	Wd-1	IM-548
Maple Grove Stone Co. P.O. Box 136 Old Fort, OH 44861 419-992-4236 Tim Bell, pres.	Maple Grove Stone Co. (106)	Seneca	limestone	193,591	193,591	Sa-2	IM-352
Marshall Quarry, Inc. 11199 State Route 124 Hillsboro, OH 45133 937-466-2636 Ronald L. Main, pres.	Marshall Quarry, Inc. (43)	Highland	limestone	7,003	7,003	Hd-4	IM-406
Martin Marietta Aggregates 5253 Wooster Rd. Cincinnati, OH 45226 937-454-1128 Geoff Harris, div. pres.	Hamilton #710 (29) Fairfield Plant (33) Ross (34) Fairfield #711 (30) Springfield #423 (16) Fairborn #413 (52) Fort Jefferson #424 (19) Delaware Stone #227 (22) Shawnee #225 (20) Blue Rock Limestone #427 (27) Marble Cliff #224 (30) Columbus #210 (95) Lockbourne #213 (96) Columbus Limestone #221 (31) Cedarville Limestone #425 (32) Fairborn Limestone #431 (142) Haines Rd. #419 (405) Xenia #414 (110) Spring Valley Gravel #434 (404) Beaver Creek Limestone #426 (155) Cleves Plant (126)	Butler Butler Butler Butler Clark Clark Darke Delaware Delaware Fayette Franklin Franklin Franklin Franklin Greene Greene Greene Greene Greene Greene Hamilton	sand & gravel sand & gravel sand & gravel sand & gravel limestone sand & gravel limestone limestone limestone limestone limestone sand & gravel sand & gravel limestone limestone limestone sand & gravel sand & gravel sand & gravel limestone sand & gravel	758,730 642,000 1,760,519 939,791 175,033 686,448 696,924 487,221 1,364,518 1,046,982 840,147 3,026,000 612,013 186,569 128,801 721,264 674,724	752,807 620,000 1,838,391 854,813 0 824,557 721,207 422,882 1,752,482 966,394 840,147 3,054,791 510,071 106,656 36,500 723,763 702,951	Br-5 Br-14 Br-29 Br-35 Ck-1 Ck-13 Dke-1 Del-3 Del-4 Fe-2 Fn-2 Fn-6 Fn-23 Fn-53 Ge-17 Ge-25 Ge-32 Ge-33 Ge-42 Ge-45 Hmn-3	IM-153 IM-147 IM-149 IM-200 IM-373 IM-366 IM-362 IM-327 IM-262 IM-169 IM-261 IM-185 IM-183 IM-185 IM-435 IM-437 IM-400 IM-379 IM-954 IM-364 IM-137, IM-821

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Martin Marietta Aggregates (cont.)	Camp Dennison (127) Harrison #712 (118) Roell (131) Campbell Rd. #715 (407) Kilby Rd. #713 (119) Miamitown (468) Lynchburg (175) East Liberty #226 (49) Apple Grove Plant (209) Troy Gravel #433 (219)	Hamilton Hamilton Hamilton Hamilton Hamilton Hamilton Highland Logan Meigs Miami	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel limestone limestone sand & gravel sand & gravel	678,000 1,302,224 450,000 714,000 572,083 652,000 313,251	649,000 1,461,130 456,000 609,000 560,313 700,000 137,358	Hmn-5 Hmn-37 Hmn-68 Hmn-69 Hmn-AAC Hmn-D Hd-D Lgn-1 Ms-205 Mi-3	IM-148 IM-170 IM-747 IM-969 IM-716 IM-1079 IM-1170 IM-574 IM-30 IM-462, IM-658
	Piqua Gravel #430 (216) Tipp City Gravel #435 (220) Phillipsburg Limestone #421 (70) Dayton Limestone #420 (71) Rip Rap Rd. #416 (224) Huber Heights Limestone #432 (143) American Aggregates Corp. (571) Franklin #714 (349)	Miami Miami Montgomery Montgomery Montgomery Montgomery Preble Warren	sand & gravel sand & gravel limestone limestone sand & gravel limestone sand & gravel sand & gravel	 974,627 146,190 38,146 111,770 654,963	 1,039,131 0 0 64,000 667,953	Mi-6 Mi-8 My-1 My-23 My-66 My-73 Pre-AAC Wan-38	IM-356 IM-355 IM-374 IM-368 IM-677 IM-330 IM-779 IM-615
Martin Marietta Magnesia Specialties, Inc. 755 Lime Rd. Woodville, OH 43469 419-849-3111 Steve Raffensperger, pres.	Woodville Quarry (102)	Sandusky	limestone	2,854,000	2,854,000	Sy-1	IM-537
R.J. Martin Service & Excavating dba Horseshoe Bend Sand and Gravel 1875 Roxanna-New Burlington Rd. Waynesville, OH 45068 937-862-4182 Roger J. Martin, pres.	Horseshoe Bend Sand & Gravel (403)	Greene	sand & gravel	941	941	Ge-40	IM-923
Mason's Sand & Gravel Co. 2385 Rathmell Rd. Columbus, OH 43207 614-491-3611 Gordon Masteller, pres.	Mason's Sand & Gravel Co. (100)	Franklin	sand & gravel	91,538	91,538	Fn-11	IM-234
Massillon Materials, Inc. 26 N. Cochran St. P.O. Box 499 Dalton, OH 44618 330-832-4767 Howard J. Wenger, pres.	Massillon Materials, Inc. (495)	Stark	sand & gravel	772,745	772,745	Sk-M	IM-1031
Mathews Sand & Gravel 5061 Monroe Center Conneaut, OH 44030 440-594-1130 Edward Mathews, owner	Mathews Sand & Gravel (651)	Ashtabula	sand & gravel	910	910	Asa-M	IM-1301
Maxville Quarries, Inc. 7957 State Route 668 South Logan, OH 43138 740-385-2568 David J. McCort, pres.	Carpenter (89) Downhour (168)	Perry Perry	limestone limestone	183,428 0	0 177,476	Py-235 ⁴ Py-343 ⁴	IM-515 IM-1061
McCarthy Stone Quarry 6326 County Rd. 61 Upper Sandusky, OH 43351 419-294-2611 Charles H. McCarthy, owner	McCarthy Stone Quarry (133)	Wyandot	limestone	263,659	263,659	Wt-3	IM-298
Mecco, Inc. 2504 S. Main St. Middletown, OH 45042 513-422-3781 David T. Morgan, pres.	Mecco, Inc. (39)	Butler	sand & gravel	330,210	346,800	Br-15	IM-316
Mechanicsburg Sand & Gravel, Inc. P.O. Box 18 Mechanicsburg, OH 43044 937-834-2606 John D. Cushman, pres.	Mechanicsburg Sand & Gravel, Inc. (50)	Champaign	sand & gravel	169,552	169,552	Cpn-22	IM-889

⁴Production only at Py-343; sales only at Py-235.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Meigs County Commissioners Route 2 Rocksprings Rd. Pomeroy, OH 45769 740-992-2911 David H. Spencer, office mgr.	Meigs County Pit (211)	Meigs	sand & gravel	34,380	34,380	Ms-301	IM-619
Melvin Stone Co. 228 Melvin Rd. Wilmington, OH 45177 937-584-2486 Craig Beam, pres.	Melvin Stone Co. (17) Fayette (28) Island Rd. (251) Williamsport (92) Richards Farms (481)	Clinton Fayette Pickaway Pickaway Pickaway	limestone limestone sand & gravel limestone sand & gravel	1,728,797 241,898 559,021 559,021 299,378	1,728,797 241,898 559,021 559,021 299,378	Clm-1 Fe-1 Pky-1 Pky-4 Pky-R	IM-241 IM-831 IM-428 IM-209 IM-993, IM-1204
Menuez Bros. Sand & Gravel, Inc. 5366 County Rd. 349 Route 1 Millersburg, OH 44654 330-674-4254 Gene Menuez, pres.	Fair Pit (153)	Holmes	sand & gravel	181,428	181,428	Hs-82	IM-707
Mesenburg Bros., Inc. R.D. 1 Collins, OH 44826 419-668-5691 Peter J. Mesenburg, pres.	Mesenburg Bros., Inc. (20)	Huron	sandstone	6,426	6,426	Hrn-8	IM-268
Miami River Stone Co. 1120 Milligan Ct. Suite 104 Sidney, OH 45365 937-492-5412 Thomas Milligan, pres.	Miami River Stone Co. (110) Washington Twp. Pit (312) Rock Run Quarry (111) Miami River Stone Co. (311) Staley Pit (577)	Shelby Shelby Shelby Shelby Shelby	limestone sand & gravel limestone sand & gravel sand & gravel	577,231 41,674 0 0 10,800	577,231 41,674 200 0 10,800	Shy-6 Shy-13 Shy-16 Shy-17 Shy-SS	IM-389 IM-412 IM-411 IM-389 IM-438
Doug Mill 1800 Mt. Vernon Rd. Newark, OH 43055 740-763-3901 Doug & Susan Mill, owner	Newark (174)	Licking	sand & gravel			Lg-2	IM-184
Miller Bros. Construction, Inc. Route 1, Box 30 Archbold, OH 43502 419-445-1015 Dean Miller, pres.	Miller Bros. Construction, Inc. (526)	Logan	sand & gravel			Lgn-M	IM-799
Miller Bros. Gravel, Inc. 7900 S. Kessler-Frederick Rd. Tipp City, OH 45371 937-836-0981 Thomas O. Miller, pres.	Miller Bros. Gravel, Inc. (233)	Montgomery	sand & gravel	289,859	236,162	My-52	IM-348
Miller Sand & Gravel, Inc. 10228 State Route 82 Windham, OH 44288 330-326-3157 Donald M. Miller, pres.	Miller Sand & Gravel, Inc. (272)	Portage	sand & gravel	2,610	2,610	Pe-39	IM-1078
Mills Rock, Sand, & Soil, Inc. 4022 State Route 303 Mantua, OH 44255 330-297-7579 Alvin Mills, pres.	Mills Pit (676)	Portage	sand & gravel			Pe-M	IM-1312
Mitchell Transport, Inc. 1300 E. 9th St. Suite 1100 Cleveland, OH 44114-1503 216-942-9191 Robert Amos, pres.	North Park Reclamation Clay Center (92)	Lake	clay			Lke-M	IM-1059
Moore's Excavating Co. 2222 N. State Route 68 Urbana, OH 43078 937-653-6288 Ralph Moore, pres.	Moore's Excavating Co. (620) Moore's Excavating Co. (51) (153) Moore's Excavating Co. (619)	Clark Champaign Champaign	sand & gravel sand & gravel clay sand & gravel	83,925 83,925 16,142	83,925 83,925 16,142	Ck-29 Cpn-20 Cpn-25 ⁵	IM-1233 IM-482 IM-1227
Moraine Materials Co., Inc. 9661 Sugar St. Germantown, OH 45327 937-855-2228 George Kling, pres.	Middletown (41) Germantown (239) (10)	Butler Montgomery	sand & gravel sand & gravel peat	94,569 238,709	94,569 238,709	Br-6 My-41	IM-177 IM-360

⁵This mine was operated January through May 1997 by T. K. Stone Co., Inc. and June through December 1997 by Moore's Excavating Co.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Morrow Gravel Co. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 James P. Jurgensen, pres.	Urbana #215 (48) Walls Materials (63) Morrow Gravel Co. (501) Morrow Gravel Co. (502) Morrow Gravel Co. (503)	Champaign Mercer Warren Warren Warren	sand & gravel limestone sand & gravel sand & gravel sand & gravel	101,500 162,850 257,000	101,500 162,850 257,000	Cpn-1 Mr-2 Wan-M ⁶ Wan-M1 Wan-M2	IM-371 IM-430 IM-728, IM-1065 IM-1051 IM-837
Morton International, Inc. Morton Salt Division P.O. Box 428 Grand River, OH 44045-0428 440-639-4243 Richard L. Wilson, facility mgr.	Fairport Mine (2)	Lake	salt	1,600,896	1,569,995	Lke-6	
Morton International, Inc. Morton Salt Division 151 S. Industrial St. P.O. Box 337 Rittman, OH 44270-0337 330-925-3015 Jay Stewart, pres.	Morton Salt Well Field (5)	Wayne	salt	537,878	556,043	We-9129	
Mt. Eaton Reclamation, Inc. P.O. Box 256 Mt. Eaton, OH 44659 330-359-5364 Freeman Mullet, pres.	Mt. Eaton Reclamation, Inc. (64) (144) (144)	Wayne	sandstone clay shale	48,000	48,000	We-26	IM-690, IM-1210
Muskingum River Gravel Co. P.O. Box 1585 Zanesville, OH 43702-1585 937-453-0624 Larry E. Young, v. pres.	S & S #8 (152) S & S #1 (247) S & S #4 (448) S & S #7 (452) Plant #2 (367)	Hocking Muskingum Muskingum Ross Washington	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	211,538 189,985 100 176,512 47,515	208,290 191,339 100 168,591 33,286	Hg-301 Mum-228 Mum-262 Rs-M Wn-38	IM-458 IM-421 IM-422 IM-114 IM-701
National Aggregates, Inc. P.O. Box 340 Malvern, OH 44644 330-866-1999 William Scheckler, pres.	National Aggregates, Inc. (610)	Stark	sand & gravel	418,967	418,967	Sk-1017	IM-1186
National Lime & Stone Co. P.O. Box 120 Findlay, OH 45839-0120 419-422-4341 R. W. Kruse, v. pres.	Lima Plant (5) Buckland Plant (11) Wapakoneta Plant (24) Bucyrus Plant (18) Delaware Plant (21) Findlay Plant (149) Marion Plant (60) Carey Plant (134) Upper Sandusky Plant (380) Upper Sandusky Plant (381)	Allen Auglaize Auglaize Crawford Delaware Delaware Hancock Marion Wyandot Wyandot Wyandot	limestone limestone sand & gravel limestone limestone limestone limestone limestone sand & gravel sand & gravel sand & gravel	1,254,253 614,879 248,182 1,788,152 3,430,633 1,509,679 638,651 2,813,628 270,007	1,193,120 610,172 228,497 1,896,740 3,658,584 1,481,173 499,949 2,875,561 272,920	An-3 Ae-10 Ae-30 Cd-1 Del-5 Hk-7 Mn-3 Wt-1 Wt-15 Wt-18 ⁷	IM-484 IM-486 IM-598 IM-404 IM-207 IM-1002 IM-168 IM-405 IM-376 IM-551
Neer's Sand & Gravel 4859 Township Rd. 45 Bellefontaine, OH 43311 937-585-6733 Arden J. Neer, Sr., owner	Neer's Sand & Gravel (189)	Logan	sand & gravel	236,417	279,734	Lgn-6	IM-459
Nelson Sand & Gravel, Inc. P.O. Box 466 Kingsville, OH 44048 440-224-0198 Thomas H. Nelson, pres.	Nelson Sand & Gravel, Inc. (14) Nelson Sand & Gravel, Inc. (510)	Ashtabula Ashtabula	sand & gravel sand & gravel	40,110	40,110	Asa-12 Asa-N	IM-1130 IM-1109
Nelson Stark Co. 7685 Fields-Ertel Rd. Cincinnati, OH 45241 513-489-0871 Charles Stark, owner	Nelson Stark Gravel Pit (520)	Hamilton	sand & gravel			Hmn-C	IM-1132
New Carlisle Sand & Gravel Co. 6090 S. Scarff Rd. New Carlisle, OH 45344 937-845-0696 W. Lee Upton, owner	New Carlisle Sand & Gravel Co. (217)	Miami	sand & gravel	714	714	Mi-501	

⁶Information for Wan-M is reported under Wan-M2.⁷Information for Wt-18 is reported under Wt-15.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Newbury Sand & Gravel 15365 Ravenna Rd. Burton, OH 44021 440-834-0200 Blaine M. Kaufman, owner	Newbury Sand & Gravel (517) (50)	Geauga	sand & gravel sandstone	34,510 18,115	34,510 18,115	Gea-N	IM-1123
Newton Asphalt Paving, Inc. P.O. Box 86 Strasburg, OH 44680 330-878-5648 G. A. Gessner & C. T. Newton, partners	516 (428)	Tuscarawas	sand & gravel	99,534	99,534	Ts-2001	IM-1004
Nick's Trucking 14228 Madison Rd. Middlefield, OH 44062 440-632-1949 Nick R. Loze, owner	Nick's Trucking (584)	Trumbull	sand & gravel	8,400	8,400	TL-16	IM-1158
Andy Nixon Contractors, Inc. 14088 U.S. Route 20A Montpelier, OH 43543 419-485-5528 Andy Nixon, pres.	Nixon Pit (665)	Williams	sand & gravel	960	960	Ws-N	IM-1291
North Shore Stone Quarries, Inc. 72 Fernhill Ave. Columbus, OH 43228 614-878-0620 Clifford Hammond, pres.	North Shore Stone Quarries, Inc. (109)	Seneca	limestone	5,270	5,270	Sa-8	IM-313
Northern Ohio Paving Co. 1749 Highland Dr. Twinsburg, OH 44087 216-425-7861 Walter H. Edwards, pres.	Allied Plant #3 (316)	Stark	sand & gravel	319,804	375,900	Sk-N	IM-156
Northshore Coal, Inc. 100 W. Main St. St. Clairsville, OH 43950 740-695-7237 C.F. Dawson, pres.	Uniontown (201) Northshore Limestone (195)	Belmont Belmont	limestone limestone	21,295 13,946	21,295 13,946	Bt-B Bt-N	D-998 IM-1283
Carl E. Oeder & Sons Sand & Gravel 3890 Turtlecreek Rd. Lebanon, OH 45036 513-494-1238 Carl E. Oeder, pres.	Oeder Pit (352)	Warren	sand & gravel	516,781	516,781	Wan-41	IM-629
Oglebay Norton Industrial Sands, Inc. 806 Market St. P.O. Box 4477 Zanesville, OH 43702-4477 740-452-2775 Mark Juszli, pres.	Millwood (644) (24) Glass Rock (48) (137)	Knox Perry	sand & gravel sandstone sandstone clay	177,571 188,554	177,571 188,554	Kx-1 Py-344	IM-269 IM-1014
Ohio Asphaltic Limestone Corp. 8591 Mad River Rd. Hillsboro, OH 45133 937-364-2191 W. C. Mason, pres.	Ohio Asphaltic Limestone Corp. (42)	Highland	limestone	465,732	468,500	Hd-3	IM-253
Ohio Bulk Transfer Co. P.O. Box 25527 Garfield Heights, OH 44125 216-883-7200 James Palladino, pres.	Twinsburg Sand & Gravel (68)	Summit	sandstone			St-60	IM-1206
Ohio-West Virginia Excavation 57245 Ferry Landing Rd. Dilles Bottom, OH 43947 740-676-7464 Dennis Hendershot, pres.	OH-WV Excavation (424)	Monroe	sand & gravel	5,876	5,876	Me-508	IM-1000
Oldtown Coal Co. 4412 Pleasant Valley Rd. SE Dennison, OH 44621 740-922-3942 Mary J. Brown, pres.	CW/MWCD Clay Project (183)	Stark	clay	97,379	97,379	Sk-O	IM-1276

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Olen Corp. 4755 South High St. Columbus, OH 43207-4028 614-491-1515 Wayne Rayburn, pres.	Stewart Plant #4 (459) Hillard Plant #1 (154) (102) Columbus Plant #3 (465) Fredericktown Plant #2 (161) St. Louisville Plant #5 (176)	Athens Franklin Franklin Knox Licking	sand & gravel limestone sand & gravel sand & gravel sand & gravel	118,435 371,428 389,764 2,488,000 510,000 265,000	76,000 480,000 389,764 2,700,000 615,000 250,000	As-W Fn-43 Fn-58 Kx-16 Lg-31	IM-979 IM-188 IM-1023 IM-793 IM-246
Oneida Sand & Gravel, Inc. 8000 Blade Rd. NW Malvern, OH 44644 330-863-0808 Louis H. Smitley, pres.	Oneida Sand & Gravel, Inc. (47)	Carroll	sand & gravel	87,657	87,657	Cl-204	IM-554
Osborne Materials Co. P.O. Box 248 Grand River, OH 44045-0248 440-357-5562 Harold T. Larned, pres.	Osborne Materials Co. (2)	Lake Erie	sand & gravel	135,470	135,470	Lke-dredge	
Oster Sand & Gravel, Inc. 5947 Whipple Ave. NW North Canton, OH 44720-7692 330-494-5472 Marlene K. Oster, pres.	Massillon Plant (326) Mudbrook Plant (581) Bolivar Pit (586)	Stark Stark Tuscarawas	sand & gravel sand & gravel sand & gravel	610,888 29,573 267,979	610,888 29,573 267,979	Sk-165 Sk-R Ts-2036	IM-192 IM-697 IM-1155
Ours Sand & Gravel 20444 State Route 7 S Crown City, OH 45623 740-256-1378 Donald Ours, owner	Ours Sand & Gravel (466)	Gallia	sand & gravel	9,765	9,765	Ga-O	IM-1028
Oxford Mining Co., Inc. P.O. Box 427 Coshocton, OH 43812 740-623-0015 Charles C. Ungurean, pres.	JTM (181) Heritage (187) (187)	Coshocton Coshocton	clay clay shale			Cn-JT Cn-O	IM-1253 IM-1256
P & H Construction 3745 S. Third St. Ironton, OH 45638 740-533-3030 Paul Popov, pres.	P & H Mine (182)	Lawrence	shale			Le-PH	IM-1268
Mary Ellen & Ray Patterson 3294 Sunnybrook Rd. Mogadore, OH 44260 330-678-4118 Mary Ellen & Ray Patterson, co-owners	Brimfield Sand & Gravel (605)	Portage	sand & gravel			Pe-102	IM-1184
R. H. Penick Co. 1504 Blue Jay Rd. Heath, OH 43056-1767 740-323-3040 R. H. Penick, owner	R. H. Penick Co. (3)	Licking	salt	18,268	18,268	Lg-45	
Penry Stone Co. P.O. Box 176 Radnor, OH 43066 740-595-3373 Walter P. Penry, pres.	Radnor Plant (23) Prospect Plant (198)	Delaware Marion	limestone sand & gravel	458,074 15,383	458,074 15,383	Del-2 Mn-4	IM-299 IM-290
Phillips Sand & Gravel U.S. Route 35 Box 187 Alpha, OH 45301 937-426-5461 George E. Phillips, pres.	Phillips Sand & Gravel (115)	Greene	sand & gravel	458,395	458,395	Ge-36	IM-305
Piqua Materials, Inc. Piqua Minerals Division 1750 W. Statler Rd. Piqua, OH 45356 937-773-4824 Albert R. Donovan, pres.	Piqua Minerals Division (64)	Miami	limestone	604,706	642,113	Mi-1	IM-382
Pleasant Valley Limestone 12321 Ideal Rd. Byesville, OH 43723 740-452-3915 George V. Thompson, pres.	Pleasant Valley Limestone (185)	Muskingum	limestone	115,422	115,422	Mum-907	IM-1200

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
C. F. Poeppelman, Inc. 4755 N. State Route 721 Bradford, OH 45308 937-448-2191 James C. Poeppelman, pres.	C. F. Poeppelman, Inc. (67)	Miami	limestone	365,673	365,673	Mi-10	IM-335
Portage Lakes Sand & Gravel Co. 2800 N. Turkeyfoot Rd. Akron, OH 44319 330-644-2285 Richard R. Buescher, pres.	Portage Lakes Sand & Gravel Co. (384)	Summit	sand & gravel			St-53	IM-874
Powell Gravel & Topsoil, Inc. P.O. Box 214 Harrison, OH 45030 513-353-1400 Ronald Powell, pres.	Powell Gravel & Topsoil, Inc. (134)	Hamilton	sand & gravel	663,466	663,466	Hmn-71	IM-771
Prairie Lane Sand & Gravel Co. 4401 Prairie Lane Rd. P.O. Box 233 Wooster, OH 44691 330-262-6821 Ralph W. Miller, pres.	Prairie Lane Sand & Gravel Co. (372) (179)	Wayne	sand & gravel shale	237,325 23,011	237,325 23,011	We-11	IM-547
Precision Aggregate, Inc. 12205 E. Gypsy Lane Rd. Bowling Green, OH 43402 419-686-2366 Randy Schmeltz, pres.	Precision Aggregate II (183) (666) Precision Aggregate I (379)	Wood Wyandot	limestone sand & gravel sand & gravel	268,318 59,055	277,318 127,055	Wd-14 Wt-4	IM-1157 IM-520
Putnam Stone Co. R.R. 1 7053 Road M Ottawa, OH 45875-9754 419-523-6004 Tony Shroyer, pres.	Putnam Stone Co. (98)	Putnam	limestone	249,633	269,335	Pm-2	IM-570
Quality Ready Mix, Inc. R.R. 5 Wapakoneta, OH 45895 419-738-2817 Robert E. Hirschfeld, pres.	Quality Pit (25)	Auglaize	sand & gravel	46,147	46,147	Ae-16	IM-595
Quality Stone Co. 8751 North State Route 7 Cheshire, OH 45620 740-992-6637 Jay Hall, Jr., pres.	Quality Stone Co. (148) Route 32 (182)	Vinton Vinton	limestone limestone	740,109	740,109	Vn-190 Vn-193	D-0761
Quarry Trails 7500 S. Cassel Rd. P.O. Box 520 Vandalia, OH 45377 937-890-1141 John E. Moyer, Sr., pres.	Quarry Trails (178)	Montgomery	limestone			My-Q	IM-860
R & S, Inc. 7522 Wales Rd. NW North Canton, OH 44720 330-499-1024 Gary A. Ross, pres.	Copley Sand & Gravel (427)	Summit	sand & gravel			St-54	IM-934
Rack Sand, Inc. 5175 Este Ave. Cincinnati, OH 45232 513-242-0271 Roy Schweitzer, owner	Rack Sand, Inc. (139)	Hamilton	sand & gravel	79,000	79,000	Hmn-10	IM-226
Rainbow Sand & Gravel, Inc. 9500 Elliman Rd. Mantua, OH 44255 216-562-4701 Bernard Udelson & Jeremy Samson, owners	Rainbow Sand & Gravel, Inc. (280)	Portage	sand & gravel	108,834	107,373	Pe-64	IM-1017
John P. Raisch, Inc. P.O. Box 93 Miamisburg, OH 45342 937-866-3094 John P. Raisch, owner	John P. Raisch, Inc. (562)	Montgomery	sand & gravel	4,969	4,969	My-R	IM-539

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Red Brush Peat Co. 6945 Red Brush Rd. Ravenna, OH 44266 330-297-0923 Barbara H. Linger, owner	Red Brush Peat Co. (482) (116) (9)	Portage	sand & gravel clay peat	1,303 267	1,303 267	Pe-61	IM-1064
Redland Ohio, Inc. P.O. Box 128 Woodville, OH 43469 419-849-2321 Gary Zager, operations mgr.	Woodville Plant (104) Millersville (103)	Sandusky Sandusky	limestone limestone	1,530,328	1,599,912	Sy-3 Sy-4 ⁸	IM-282 IM-381
Richards Service Garage 2170 Wilberforce-Clifton Rd. Xenia, OH 45385 937-372-8263 Roger Richards, owner	Richards Service Garage (547)	Greene	sand & gravel			Ge-R	IM-829
Richland Moulded Brick Co. 1000 Richland Shale Rd. P.O. Box 1711 Mansfield, OH 44901 419-524-0000 Dudley P. Frame, Jr., pres.	Richland Moulded Brick Co. (114)	Richland	shale			Rd-R	IM-1035
Ridge Township Quarry 16905 Middlepoint Rd. Van Wert, OH 45891 419-238-2533 Jenny Lautenschleger, foreman	Ridge Township Quarry (122)	Van Wert	limestone	78,968	78,968	Vt-7	IM-642
Ries Sand & Gravel 169 State Route 95 Jeromesville, OH 44840 419-368-7833 Robert Ries, owner	Ries Sand & Gravel (6)	Ashland	sand & gravel	1,311	1,311	Ald-9	IM-745
Riverside Sand & Gravel Co., Inc. P.O. Box 324 Tallmadge, OH 44278-0324 330-673-2021 Albert H. Acken, Jr., pres.	Riverside Sand & Gravel (333) (49)	Summit	sand & gravel sandstone	2,438	2,438	St-24	IM-239
Gary Roberts Excavating 570 Derby Downs Rd. Newark, OH 43055 740-763-3206 Gary L. Roberts, owner	Gary Roberts Excavating (419)	Licking	sand & gravel	6,307	6,307	Lg-504	IM-991
Rockwell Sand & Gravel, Inc. 8300 State Route 14 Streetsboro, OH 44241 330-626-5577 Roger Schuck, pres.	Rockwell Sand & Gravel, Inc. (273)	Portage	sand & gravel	323,028	323,028	Pe-85	IM-700
Rogers Group, Inc. dba Sandusky Crushed Stone Co. P.O. Box 338 Sandusky, OH 44871-0338 419-483-4390 Frank Warren, CEO	Parkertown Quarry (25) Norwalk Sand & Gravel (157)	Erie Huron	limestone sand & gravel	3,157,764	3,157,764	Ee-11 Hrn-1	IM-263 IM-550
Jim Romig Excavating 8084 Dawn Rd. Sherrodsville, OH 44675 740-269-1225 James Romig, owner	Wilkins Pit (153)	Coshocton	limestone			Cn-A	IM-1011
Ross County Gravel Co. P.O. Box 158 Sabina, OH 45169-0158 937-584-2486 Craig Beam, pres.	Ross County Gravel Co. (530)	Ross	sand & gravel	55,231	0	Rs-R	IM-1143
Rubber City Sand & Gravel Co. P.O. Box 106 Uniontown, OH 44685 330-699-3311 William H. Leach, Sr., owner	Rubber City Sand & Gravel Co. (334)	Summit	sand & gravel	61,496	61,496	St-9	IM-167

⁸Information for Sy-4 is reported under Sy-3.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Rubel Quarry, Inc. 35479 State Route 78 Lewisville, OH 43754 740-567-3217 Randy Rubel, pres.	Rubel Quarry, Inc. (164)	Monroe	limestone			Me-509	IM-1094
Rumpke Mountain Mining Co. 10795 Hughes Rd. Cincinnati, OH 45251 513-851-0122 William J. Rumpke, pres.	Rumpke Mountain Mining Co. (193) (190) (190)	Hamilton	limestone clay shale	101,616 1,509,403	181,701 2,292,212	Hmn-72	IM-1264
Rupp Construction, Inc. 18228 Fulton Rd. Marshallville, OH 44645 330-855-2781 Gary Radabaugh, pres.	Rupp Construction, Inc. (373)	Wayne	sand & gravel	398,313	398,313	We-7	IM-471
S. & M. Builders, Inc. 7862-F West Central Ave. Toledo, OH 43617 419-841-9113 Richard Moses, pres.	S. & M. Builders Pit (659)	Lucas	sand & gravel	98,797	98,797	Ls-SMB	IM-1290
S & S Aggregate, Inc. P.O. Box 1585 Zanesville, OH 43702-1585 740-453-0624 Larry E. Young, v. pres.	Plant #6a (101) Twin Lakes-S & S Ag #11 (281) Twin Lakes-S & S Ag #10 (282) S & S Ag #14 (292) Twin Lakes-S & S Ag #9 (336)	Franklin Portage Portage Richland Summit	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	238,386 1,492 246,856 88,361	235,989 1,492 262,402 87,506	Fn-24 Pe-59 Pe-67 Rd-5 St-44	IM-266 IM-210 IM-202 IM-470 IM-178
S & S Transport, Inc. 6710 County Rd. 624 Millersburg, OH 44654 330-674-0051 Phil Schlabach, owner	Patterson (470)	Holmes	sand & gravel	95,073	95,073	Hs-J	IM-1043
Salt Creek Materials, Inc. 880 Spry Rd. Zanesville, OH 43701 740-872-3860 Charles O. Lighthizer, owner	Salt Creek Materials, Inc. (248) Salt Creek Materials, Inc. (144)	Muskingum Muskingum	sand & gravel limestone	30,232 20,225	0 20,225	Mum-216 Mum-269	IM-689 IM-1009
Samco, Inc. 10217 State Rte. 534 N Middlefield, OH 44062 440-272-5158 J. Jim Holmes, pres.	Springbrook (340) (77) (184)	Trumbull	sand & gravel sandstone clay	378,381 5,869	378,381 5,869	Tl-12	IM-131
Sandco, Inc. 203 W. Airport Highway Swanton, OH 43558 419-875-6969 Raymond Cordray, pres.	SANDCO Sand & Topsoil (672)	Fulton	sand & gravel	14,935	30,000	Ftn-SI	IM-1308
Sandkuhl Clay Works, Inc. 05536 Kossuth-Amanda Rd. Spencerville, OH 45887 419-657-2905 Leslie E. Sandkuhl, pres.	Sandkuhl Clay Works, Inc. (2)	Auglaize	clay	7,366	7,366	Ae-7	
Sandman Sand & Stone, Inc. 8840 Geiser Rd. Holland, OH 43528 419-865-1666 Robert Parker, pres.	Archbold-Whitehouse Pit (556)	Lucas	sand & gravel	62,639	62,639	Ls-MH	IM-1144
Sands Hill Coal Co., Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Bonny A. Huffman, pres.	Sands Hill Strip #4 (158)	Jackson	limestone	283,854	283,854	Jkn-SH	IM-1068
Sant Sand & Gravel, Inc. P.O. Box 750 Mt. Vernon, OH 43050 740-397-0000 John Ellis, pres.	Sant Sand & Gravel, Inc. (163)	Knox	sand & gravel	197,846	274,330	Kx-3	IM-300

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Guy Schieve P.O. Box 83 Birmingham, OH 44816 440-965-8792 Guy Schieve, owner	Schieve Pit (191)	Lorain	sand & gravel	5,648	5,648	Ln-12	IM-731
E. H. Schilling & Sons, Inc. 964 Private Dr. Ironton, OH 45638 740-532-8463 Earl H. Schilling, pres.	E. H. Schilling & Sons, Inc. (305)	Scioto	sand & gravel			So-78	
Schloss Materials Co. 13700 McCracken Rd. Cleveland, OH 44125 216-587-4900 Carl W. Schloss, pres.	Schloss Materials Co. (274) Schloss Materials Co. (569)	Portage Portage	sand & gravel sand & gravel	80,102	80,102	Pe-60 Pe-SM	IM-78 IM-499
Scioto Valley Resources P.O. Box 760 Lucasville, OH 45648 937-364-2311 John B. Patton, pres.	Scioto Valley Resources (395)	Scioto	sand & gravel	174,519	178,543	So-100	IM-950
Mark E. Scott 32580 U.S. Route 50 P.O. Box 6112 Chillicothe, OH 45601 740-772-4990 Mark E. Scott, pres.	Scott Pit (575)	Ross	sand & gravel	40,000	40,000	Rs-P	IM-122
Seaway Sand & Stone, Inc. 2190 Whitehouse-Spencer Rd. Swanton, OH 43558 419-865-5751 Brent Gerken, pres.	Seaway Sand & Stone, Inc. (188) (195) (156) (156)	Lucas	limestone sand & gravel clay shale	179,321 46,868 17,951 3,724	179,321 46,868 17,951 3,724	Ls-13	IM-492
Seville Sand & Gravel, Inc. 8215 Seville Rd. Lodi, OH 44254 330-948-1812 George Cross, pres.	Seville Sand & Gravel, Inc. (206)	Medina	sand & gravel	304,270	304,270	Ma-22	IM-425, IM-442, IM-650, IM-651
Shady Bend Sand & Gravel P.O. Box 336 Sugarcreek, OH 44681 330-852-4862 Daniel O. Miller, owner	Shady Bend (72)	Coshocton	sand & gravel	114,295	114,295	Cn-624	IM-243
Shamrock Materials, Inc. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 James P. Jurgensen, pres.	Shamrock Materials, Inc. (38)	Butler	sand & gravel	574,036	574,036	Br-52	IM-814
Sharon Stone Co. P.O. Box 100 Dexter City, OH 45727 740-732-7100 John P. McCort, pres.	Sharon Stone Co. (167) (197)	Noble	limestone clay	146,779	146,779	Ne-S	IM-913
Shelly Materials 80 Park Dr. P.O. Box 266 Thornville, OH 43076 740-246-6315 Mark Shelly, pres.	Springfield Plant #3 (58) Coshocton Plant #5 (71) Lancaster Plant #14 (92) Mt. Vernon Plant #4 (160) Belle Center Plant #8 (51) Prospect Plant #12 (200) Racine Plant #6 (212) West Milton Plant #22 (447) Dresden Plant #9 (244) Prospect (243) Chillicothe Plant #21 (490) York Center #11 (119) Ostrander Plant #10 (120)	Clark Coshocton Fairfield Knox Logan Marion Meigs Miami Muskingum Muskingum Ross Union Union	sand & gravel sand & gravel sand & gravel sand & gravel limestone sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel limestone limestone	662,940 506,545 961,377 3,236 202,033 46,800 877,502 127,208 330,132 143,581 292,636 1,237,903	662,940 506,545 961,377 3,236 202,033 46,800 877,502 127,208 330,132 143,581 292,636 1,237,903	Ck-25 Cn-694 Fd-13 Kx-7 Lgn-2 Mn-10 Ms-298 Mi-504 Mum-799 Mum-863 ^a Rs-27 Un-1 Un-2	IM-358 IM-293 IM-848 IM-235 IM-494 IM-196 IM-32 IM-1032 IM-317 IM-264 IM-1098 IM-208 IM-236
Sidco Development, Inc. 23 W. LaSalle St. Zanesville, OH 43701 740-849-2392 Jeffrey R. Sidwell, pres.	Sidco (203)	Muskingum	limestone	356,964	356,964	Mum-SD	IM-1313

^aInformation for Mum-863 is reported under Mum-799.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
R. W. Sidley, Inc. 615 W. Main St. Conneaut, OH 44030 440-352-9343 Robert C. Sidley, pres.	Conneaut Pit (15)	Ashtabula	sand & gravel	103,700	103,700	Asa-15	IM-783
R. W. Sidley, Inc. 7123 Madison Rd. Thompson, OH 44086 440-298-3232 Robert C. Sidley, pres.	Thompson Pit (18) Hambden Quarry (58) Painesville Pit (166)	Geauga Geauga Lake	sandstone sandstone sand & gravel	160,400 450 19,300	170,000 450 19,300	Gea-1 Gea-S Lke-7	IM-163 IM-161 IM-162
Sidwell Materials 4620 Limestone Valley Rd. Zanesville, OH 43701 740-849-2392 Dale R. Sidwell, pres.	Sidwell Quarry (78) Sidwell Bros., Inc. (186)	Muskingum Muskingum	limestone limestone	487,562	487,562	Mum-104 Mum-SB	IM-277 IM-1212, IM-1269
R.G. Silvestri Enterprises 2939 Hubbard Rd. Youngstown, OH 44505 330-759-1822 Ron Silvestri, owner	R.G. Silvestri Enterprises (76)	Guernsey	sandstone			Gy-S	IM-1306
Simak Trucking, Inc. 3052 E. Center St. P.O. Box 599 North Kingsville, OH 44068 440-224-1992 Joseph Simak, pres.	Simak Trucking, Inc. (413) (166)	Ashtabula	sand & gravel clay	52,745 7,033	52,745 7,033	Asa-18	IM-949
Slankard Dozer Service, Inc. 8241 Ft. Laurens Rd. NW Strasburg, OH 44680 330-878-5883 Jerry L. Slankard, pres.	Beach City Pit (54)	Tuscarawas	sandstone			Ts-2032	IM-1141
Sleepy Hollow Sand & Gravel 2699 Johnstown-Alexandria Rd. Alexandria, OH 43001 740-927-6789 Donald Martin, pres.	Sleepy Hollow Pit (658)	Licking	sand & gravel	59,468	82,000	Lg-S	IM-1281
Small's Sand & Gravel, Inc. P.O. Box 617 Gambier, OH 43022 740-427-3677 Michael Small, pres.	Mickley Pit (162) Killduff Rd. (165) Zion Rd. (408)	Knox Knox Knox	sand & gravel sand & gravel sand & gravel	71,897 197,154 250	71,897 197,154 250	Kx-5 Kx-15 Kx-17	IM-1307 IM-967 IM-968
Sober Sand & Gravel Co. 2898 Tallmadge Rd. Ravenna, OH 44266 330-325-7088 Waldo A. Sober, pres.	Sober Sand & Gravel Co. (275)	Portage	sand & gravel	2,200	2,200	Pe-18	IM-193
Soehnlén Bros. Sand & Gravel, Inc. 10449 Soehnlén Rd. NW Beach City, OH 44608 330-756-2244 Francis L. Soehnlén, pres.	Soehnlén Bros. Sand & Gravel, Inc. (343)	Tuscarawas	sand & gravel	93,856	95,277	Ts-1826	IM-88
Solomon's Mines, Inc. 7732 Salem Unity Rd. Salem, OH 44460 330-337-0123 Jack Solomon, owner	Solomon's Mines, Inc. #2 (636) (72) (194) Solomon's Mines, Inc. #1 (196) (135)	Columbiana Mahoning	sand & gravel sandstone clay sand & gravel clay	78,655 17,877 508	78,655 17,877 508	Ca-S Mg-632 ¹⁰	IM-1258 IM-808
Solon Excavators Sand & Gravel, Inc. 10925 Mantua Center Rd. P.O. Box 1081 Mantua, OH 44255 330-274-8241 Howard Sargent, pres.	May (623) Alger (276)	Geauga Portage	sand & gravel sand & gravel	68,708 252,650	68,708 252,650	Gea-43 Pe-36	IM-1230 IM-90
Soltis Sand & Gravel 19102 Nelson Ledge Rd. Garrettsville, OH 44231 440-548-5813 James Soltis, owner	Soltis Sand & Gravel (415) (86)	Geauga	sand & gravel clay	4,098 662	4,098 662	Gea-9	IM-132

¹⁰Information for Mg-632 is reported under Ca-S.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
South Central Sand & Gravel 340 Bailey Chapel Rd. Piketon, OH 45661 740-289-2629 James Nier, pres.	Plant #1 (254)	Pike	sand & gravel	219,774	219,774	Pke-30	IM-786
Southdown Inc. 3250 Linebaugh Rd. Xenia, OH 45385 800-762-0040 Clarence Comer, pres.	A-Tract (33) Miller & Trollinger (202) (10) Batdorf, Feirstine, Schneider (34) Harner (90) G-Tract (72)	Clark Greene Greene Greene Montgomery	limestone limestone clay limestone clay limestone	 7,405 122,127 848,672 124,544	 7,405 95,350 828,304 124,544	Ge-1 Ge-8 Ge-9 Ge-44 My-58	IM-393 IM-364 IM-364 IM-330
Southern Ohio Aggregates, Inc. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 James P. Jurgensen, pres.	Southern Ohio Aggregates, Inc. (460) Southern Ohio Aggregates, Inc. (551) Southern Ohio Aggregates, Inc. (552) Southern Ohio Aggregates, Inc. (284)	Butler Hamilton Hamilton Preble	sand & gravel sand & gravel sand & gravel sand & gravel	20,000 80,000	20,000 80,000	Br-S Hmn-S Hmn-SO Pre-7	IM-1053 IM-746 IM-720 IM-306
Speer Brothers, Inc. 3812 Old Railroad Rd. Sandusky, OH 44870 419-626-5291 David Speer, pres.	101 Location (89)	Erie	clay			Ee-32	IM-1077
Sphagnum Moss Peat Farm 9904 State Route 736 Plain City, OH 43064 937-597-7251 Mike Poling, owner	Sphagnum Moss Peat Farm (2)	Champaign	peat	16,500	16,500	Cpn-9	
Spring Creek Corp. 4723 Hardin-Wapak Rd. Sidney, OH 45365 937-492-4186 Nelson E. Barhorst, pres.	Pence Deposit (314) River Quarry (112) Jones Deposit (315) "H" Mine (494)	Shelby Shelby Shelby Shelby	sand & gravel limestone sand & gravel sand & gravel	350,000 399,359 94,554	350,000 399,359 94,554	Shy-11 Shy-15 Shy-18 Shy-SC	IM-743 IM-387 IM-388 IM-1018
Spring Industries, Inc. P.O. Box 507 New Philadelphia, OH 44663 330-339-3585 Glenn Straub, pres.	Bolivar Pit (582) Midvale Pit (344)	Stark Tuscarawas	sand & gravel sand & gravel			Sk-SI Ts-1771	IM-588 IM-77
Spring Run Gravel P.O. Box 466 Killbuck, OH 44637 330-276-2444 Jeff Chaney, owner	Spring Run Gravel (416) (111)	Holmes	sand & gravel shale	30,433	30,433	Hs-96	IM-997
Spring Valley Investments, Inc. 2800 N. Turkeyfoot Rd. Akron, OH 44319 330-644-2285 Douglas K. Rennick, pres.	Spring Valley Investments, Inc. (335)	Summit	sand & gravel			St-26	IM-803
City of Springfield 201 Eagle City Rd. Springfield, OH 45502 937-390-7210 Robert Chaffin, Jr., water plant supt.	City of Springfield (437)	Clark	sand & gravel			Ck-7	IM-449
State Line Resources, Inc. Route 154 Negley, OH 44441 330-426-2728 Charles H. Muse, Jr., pres.	State Line Resources, Inc. (4) (4)	Columbiana	clay shale	46,530	46,530	Ca-505	IM-13, IM-936
State Rte. 416 Sand & Gravel 764 State Rte. 416 SE New Philadelphia, OH 44663 330-339-4313	State Rte. 416 Sand & Gravel (500)	Tuscarawas	sand & gravel			Ts-2018	IM-1076
Stewart & Reichman, Inc. 1866 State Route 416 SE Gnadenhutzen, OH 44629 740-922-0050 Timothy G. Brown, pres.	Stewart & Reichman, Inc. (346)	Tuscarawas	sand & gravel	74,551	74,551	Ts-111	IM-55

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Stocker Sand & Gravel Co. P.O. Box 176 Gnadenhutzen, OH 44629 740-254-4635 Jeffrey Stocker, pres.	Stocker Sand & Gravel Co. (347) Stocker Sand & Gravel Co. (348)	Tuscarawas Tuscarawas	sand & gravel sand & gravel	534,039 718,954	534,039 718,954	Ts-69 Ts-125	IM-51 IM-50
Stone Creek Brick Co. P.O. Box 116 Stone Creek, OH 43840 330-339-5511 A. C. Marsh, Jr., pres.	Stone Creek Clay Mine (67) Stone Creek Shale Pit (67)	Tuscarawas Tuscarawas	clay shale	40,229 6,060	40,229 6,060	Ts-1557 Ts-1558	IM-52 IM-52
Stoneco, Inc. 1345 Ford St. P.O. Box 29A Maumee, OH 43537 419-893-8731 John Bearss, pres.	Maumee Quarry (54) Celina Quarry (62) Rocky Ridge (83) Auglaize Quarry (88) Scott Quarry (121) South Montpelier (375) North Montpelier (376) Takacs Quarry (506) Lime City Quarry (131) Portage Quarry (132)	Lucas Mercer Ottawa Paulding Van Wert Williams Williams Williams Wood Wood	limestone limestone limestone limestone limestone sand & gravel sand & gravel sand & gravel limestone limestone	1,068,586 517,307 467,544 749,859 421,427 198,037 1,081,998 345,167	1,049,375 513,610 540,952 788,068 417,708 153,251 1,045,472 366,836	Ls-2 Mr-1 Oa-14 Pg-2 Vt-3 Ws-6 Ws-9 Ws-T Wd-6 Wd-11	IM-503 IM-592 IM-320 IM-481 IM-495 IM-497 IM-498 IM-1022 IM-480 IM-475
Suever Stone Co., Inc. Bloomlock Rd. P.O. Box 10 Delphos, OH 45833 419-692-9796 Neal Lause, pres.	Suever Stone Co., Inc. (7) Delphos Plant (123)	Allen Van Wert	limestone limestone	127,800 151,000	138,000 170,431	An-4 Vt-1	IM-491 IM-500
Summitville Tiles, Inc. P.O. Box 173 Summitville, OH 43962 330-223-1511 D. W. Johnson, pres.	Summitville Tiles, Inc. (5) Summitville Tiles, Inc. (127)	Columbiana Columbiana	shale shale	36,041	36,041	Ca-205 Ca-989	IM-74 IM-1110
Sunrise Sand & Gravel 4872 Meade Hollow Rd. Orwell, OH 44076 440-474-0614 Kenneth, Robert & Richard McElroy, partners	Sunrise Sand & Gravel (617)	Ashtabula	sand & gravel			Asa-21	IM-1239
Sunshine Sand Co. 8861 State Route 43 Kent, OH 44240 216-587-2700 Dorothy Strohm, pres.	Sunshine Sand Co. (528)	Portage	sand & gravel	2,318	2,318	Pe-SSC	IM-318
Swingle Drilling, Inc. 713 Keystone St. P.O. Box 220 Crooksville, OH 43731 740-982-1302 James R. Swingle, pres.	T.G. Enterprises, Inc. (138)	Perry	clay			Py-S1	IM-1183
T. K. Stone Co., Inc. 2050 E. Kingscreek Rd. Urbana, OH 43078 937-653-8201 Jerry Trout, pres.	T. K. Stone Co., Inc. (619)	Champaign	sand & gravel	2,073	2,073	Cpn-25 ¹¹	IM-1227
T.T. & K. Construction, Inc. 32 State Route 239 Portsmouth, OH 45663 740-858-6661 Patricia Picklesimer, pres.	T.T. & K. Construction, Inc. (630)	Scioto	sand & gravel			So-102	IM-1250
Tackett Builders 906 Charleston Pike Chillicothe, OH 45601 740-772-5431 Carmel G. Tackett, owner	Tackett Builders (606) (150)	Ross	sand & gravel shale	896	896	Rs-T	IM-1189
Taylorville Rd. Hardfill 4252 Taylorville Rd. Huber Heights, OH 45424 937-233-7500 James T. McDonald, pres.	Taylorville Rd. Hardfill (236)	Montgomery	sand & gravel	10,688	10,688	My-55	IM-571

¹¹This mine was operated January through May 1997 by T. K. Stone Co., Inc. and June through December 1997 by Moore's Excavating Co.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Teague Gravel Co., Inc. 10924 Kinsman Rd. Newbury, OH 44065 440-564-5671 Donald R. Teague, pres.	Teague Gravel Pit (109)	Geauga	sand & gravel	63,044	63,044	Gea-35	IM-321
Thiel Construction Co. P.O. Box 225 Blakeslee, OH 43505 419-272-2712 Lee Thiel, pres.	Thiel Construction Co. (633)	Williams	sand & gravel	7,228	7,228	Ws-21	IM-1225
Don Thompson Excavating, Inc. 1471 W. Paintersville Rd. Spring Valley, OH 45370 937-862-7911 Todd Thompson, pres.	Don Thompson Excavating, Inc. (546)	Greene	sand & gravel			Ge-46	IM-1149
Tipp Stone Co., Inc. P.O. Box 367 Troy, OH 45373 937-890-4051 T. L. Eidemiller, pres.	Troy (446) Meeker (238)	Miami Montgomery	sand & gravel sand & gravel	46,167 28,010	46,167 28,010	Mi-12 My-61	IM-467 IM-468
Towne Square Products 156 E. Broadway Westerville, OH 43081 614-882-6990 Suzanne Edgar, pres.	Towne Square Products (41)	Noble	shale	165	165	Ne-66	IM-664
Tri-County Limestone Co. 4664 Hardin-Marion Rd. North Kenton, OH 43326 419-675-7127 Norman Cochran, pres.	Tri-County Limestone Co. (61)	Marion	limestone	227,468	227,468	Mn-1	IM-250
Tri-State Asphalt Products 56290 Dilles Bottom Shadyside, OH 43947-8717 740-671-9400 Glenn Straub, pres.	Tri-State Asphalt Products (26)	Belmont	sand & gravel	21,832	0	Bt-74	IM-288
Trout Sand & Gravel Co. Route 4 Marietta, OH 45750 800-344-4948 Henry C. Trout, Jr., owner	Trout Sand & Gravel Co. (369)	Washington	sand & gravel	42,510	43,188	Wn-510	IM-25
Tuffco Sand & Gravel, Inc. P.O. Box 399 Marysville, OH 43040 614-873-3978 Charles Lewis, pres.	Tuffco Sand & Gravel, Inc. (474)	Madison	sand & gravel	163,144	163,144	Mdn-11	IM-1063
Twinsburg Development Corp P.O. Box 248 Grand River, OH 44045 330-995-0640 Michael Osborne, pres	Twinsburg Development Corp. (260) (204)	Portage	sand & gravel clay	109,506 12,376	109,506 12,376	Pe-84	IM-868
U.S. Silica Co. P.O. Box 146 Dundee, OH 44624 330-852-2012 Richard E. Goodell, pres.	Dundee Plant (42)	Tuscarawas	sandstone	12,539	16,115	Ts-1660	IM-68
Valley Clay Mining Co. 455 Gordon St. Roseville, OH 43777 740-697-2005 F. Klemm Ungemach III, pres.	Spring #4 (122) Tague Mine (173)	Muskingum Perry	clay clay	8,338 1,250	3,850 690	Mum-904 Py-V	IM-1127 IM-1245
Valley Materials Co. 4947 U.S. Route 23 S P.O. Box 400 Piketon, OH 45661 740-289-4400 Ralph McFann, pres.	Valley Materials Co. (252) (99)	Pike	sand & gravel clay	62,578	73,992	Pke-26	IM-142

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Valley Sand & Gravel, Inc. 11840 Darby Creek Rd. Orient, OH 43146 740-877-3242 Dorothy H. Combs, owner	Valley Sand & Gravel, Inc. (627)	Pickaway	sand & gravel	43,623	43,623	Pky-C	IM-1223
John Van Horn Trucking 6945 Private Rd. 480 Loudonville, OH 44842 419-994-4222 John Van Horn, owner	John Van Horn Trucking (643) (191)	Holmes	sand & gravel shale	402	402	Hs-VH	IM-1263
Van Wey Sand & Gravel, Inc. 6824 Mt. Vernon Rd. NE Newark, OH 43055 740-745-5965 Rock Van Wey, pres.	Van Wey Sand & Gravel, Inc. (179)	Licking	sand & gravel	730,473	751,605	Lg-10	IM-217
VFL Technology Corp. 16 Haggerty Blvd. West Chester, PA 19382-7594 610-918-1100 Richard W. Patton, pres.	Ohio Power land (79) (202)	Gallia	sandstone clay	75,580	75,580	Ga-VFL ¹²	IM-1314
Ralph C. Wagner & Sons 7317 Brinker St. Navarre, OH 44662 330-879-2516 Michael Wagner, owner	Wagner & Sons (579)	Stark	sand & gravel	250	250	Sk-W	IM-867
Wagner Quarries Co. 4203 Milan Rd. Sandusky, OH 44870 419-625-8141 Stephen C. Lochner, pres.	Wagner Quarries Co. (26)	Erie	limestone	2,298,373	2,076,839	Ee-1	IM-310
Wallace Road Sand & Gravel P.O. Box 74 Petersburg, OH 44454 330-542-9397 David Sugar, pres.	Wallace Road Sand & Gravel (475)	Mahoning	sand & gravel	4,800	5,500	Mg-630	IM-1091
Waller Bros. Stone Co. P.O. Box 157 McDermott, OH 45652 740-259-2356 F. L. Waller, pres.	Inskeep Quarry (36) Crabtree Quarry (37) Miller Quarry (38)	Scioto Scioto Scioto	sandstone sandstone sandstone	9,565 6,466	9,565 6,466	So-48 So-76 So-82	IM-140 IM-141 IM-158
Carl Walter 11098 Bower Rd. Minerva, OH 44657 330-894-2315 Carl Walter, owner	Walter Pit (653)	Columbiana	sand & gravel	4,620	4,620	Ca-W	IM-1279
Walter's Gravel 11302 National Rd. SE Thornville, OH 43076 740-323-0783 Julane Barton, owner	Walter's Gravel (180)	Licking	sand & gravel			Lg-15	
Ward Materials, Inc. 385 Oak St. R.R. 2 Leipsic, OH 45856 419-943-2450 Arnold W. Rosebrock, pres.	Ward Materials, Inc. (2)	Allen	sand & gravel	44,173	39,543	An-15	IM-721
Don Wartko Construction, Inc. 975 Tallmadge Rd. Kent, OH 44240 330-673-5252 Donald Wartko, pres.	Don Wartko Construction, Inc. (483)	Portage	sand & gravel			Pe-92	IM-522
Waste Management of Ohio, Inc. dba Countywide RDF 3619 Gracement St. SW East Sparta, OH 44626 330-874-3855 Dave Bower, pres.	Countywide RDF (53) (53)	Stark	clay shale	30,000 281,284	30,000 281,284	Sk-217	D-0938

¹²This mine was operated January through July 1997 by VFL Technology Corp. and August through December 1997 by Beaver Excavating, Inc.

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 Phil A. Bowman, v. pres.	Bowman Strip-Zoar Quarry (47) (23)	Jackson	limestone clay	381,234 35,422	381,234 35,422	Jkn-367	D-594, D-892, D-968, D-1083
Watson Gravel, Inc. 2728 Hamilton-Cleves Rd. P.O. Box 277 Ross, OH 45061 513-863-0070 Ronald E. Watson, pres.	Watson Pit (44) River Pit (667) Spring Valley (441) Harrison Pit (142) Mason Pit (363)	Butler Butler Greene Hamilton Warren	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	854,663 77,516 708,893 774,720 774,720	854,663 77,516 708,893 774,720 774,720	Br-47 Br-57 Ge-38 Hmn-60 Wan-10	IM-111 IM-333 IM-761 IM-465
Weber Sand & Gravel, Inc. Route 2 Box 3 Bryan, OH 43506 419-636-7920 Thomas G. Weber, pres.	Weber Sand & Gravel, Inc. (377)	Williams	sand & gravel	299,705	299,705	Ws-11	IM-509, IM-661
Joann O. Weddle 2419 U.S. Route 68 N Yellow Springs, OH 35387 937-374-1234 Joann Weddle, pres.	S & W (549)	Greene	sand & gravel			Ge-W	IM-645
Weidle Sand & Gravel, Inc. P.O. Box 247 Germantown, OH 45327 937-855-2228 Ron Weidle, Sr., pres.	Weidle Sand & Gravel, Inc. (158)	Montgomery	clay			My-W	IM-1207
Welch Sand & Gravel, Inc. 10217 Columbia St. Harrison, OH 45030-9751 513-353-3220 Charles H. Welch, pres.	Schlichter Pit (45) Fernald Pit (143) East Miami Pit (144)	Butler Hamilton Hamilton	sand & gravel sand & gravel sand & gravel	192,536 517,256 348,200	192,536 517,256 348,200	Br-38 Hmn-42 Hmn-48	IM-218 IM-823 IM-220
White Rock Quarry, L.P. Div of U.S. Aggregates, Inc. P.O. Box 119 Clay Center, OH 43408-0119 419-855-8388 Jim Fehsenfeld, pres.	White Rock Quarry (82)	Ottawa	limestone	1,205,777	1,454,152	Oa-6	IM-296
Frank Widmor Coal Co., Inc. P.O. Box 176 Blaine, OH 43909 740-635-4811 Jay Van Dyne, pres.	Bellaire Stone (152) (56) (105) (105)	Belmont	limestone sandstone clay shale	352,429 24,709	352,429 24,709	Bt-1190	IM-1089
Mark Williams Blacktop Co., Inc. Route 4 Box 34 Marietta, OH 45750 740-373-2457 Mark Williams, owner	Williams Pit #2 (504) Williams Pit #1 (534)	Washington Washington	sand & gravel sand & gravel	30,275 20,000	0 20,000	Wn-1007 Wn-1009	IM-1042 IM-525
Willowbrook 39130 Brookfield St. P.O. Box 304 Lisbon, OH 44432 330-424-7493 Ray Perrino, owner	Willowbrook (538)	Columbiana	sand & gravel	30,331	30,331	Ca-993	IM-1180
Gene T. Wilson P.O. Box 46 Mt. Sterling, OH 43143 740-869-4406 Gene Wilson, owner	Wilson Pit (565)	Pickaway	sand & gravel	1,008	1,008	Pky-W	IM-1176
Dennis Winzeler 03985 12/C Bryan, OH 43506 419-636-4285 Dennis & Polly Winzeler, owners	Dennis Winzeler (378)	Williams	sand & gravel			Ws-14	IM-614
Wise Gravel 8535 W. Klinger Rd. Covington, OH 45318 937-473-3246 John A. Wise, owner	Wise Gravel (221)	Miami	sand & gravel	1,215	1,215	Mi-9	IM-408

1997 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1997 sales (tons)	1997 production (tons)	State mine number	Mining and reclamation permit number
Wyandot Dolomite, Inc. P.O. Box 126 Carey, OH 43316-0126 419-396-7641 David J. Wolfe, pres.	Wyandot Dolomite, Inc. (135)	Wyandot	limestone	1,933,233	2,034,740	Wt-8	IM-273
Wysong Gravel Co. P.O. Box 5 West Alexandria, OH 45381 937-962-2559 John & Carroll Wysong, owners	Camden Plant (285) West Alexandria Plant (286)	Preble Preble	sand & gravel sand & gravel	218,545 101,583	218,546 101,583	Pre-4 Pre-6	IM-477 IM-478
Wysong Stone Co. 5897 State Route 503 N P.O. Box 159 Lewisburg, OH 45338 937-962-2559 Gerald E. Wysong, pres.	Wysong Stone Co. (95)	Preble	limestone	85,465	85,465	Pre-5	IM-447
X L Sand & Gravel P.O. Box 157 Negley, OH 44441 330-426-9876 Robert Lansberry, pres.	X L Sand & Gravel (68)	Columbiana	sand & gravel	60,225	60,225	Ca-881	IM-611
Xenia Sand, Gravel, & Asphalt Co. 588 Dayton-Xenia Rd. Xenia, OH 45385 937-372-2978 David A. Thompson, owner	Xenia Sand, Gravel, & Asphalt Co. (117)	Greene	sand & gravel	300	300	Ge-10	IM-518
Young's Sand & Gravel Co. 689 State Route 39 W P.O. Box 117 Loudonville, OH 44842 419-994-3040 Milton Young, pres.	Sprang (8) Young's Sand & Gravel Co. (412) Young's Sand & Gravel Co. (616)	Ashland Ashland Ashland	sand & gravel sand & gravel sand & gravel	74,876 164,728 134,777	74,876 164,728 134,777	Ald-7 Ald-15 Ald-Y	IM-392 IM-944 IM-1216
Zerger's Quarry 100 N. Sycamore St. Woodsfield, OH 43793 740-472-1675 Herman Zerger, owner	Zerger's Quarry (80)	Noble	limestone			Ne-86	IM-70
Zoar Mining Co. P.O. Box 667 Zoar, OH 44697-0667 330-223-1511 David W. Johnson, pres.	Zoar Mining Co. (71) (71)	Tuscarawas	clay shale	2,516	2,516	Ts-540	IM-28
Zollinger Sand & Gravel Co. 11899 Easton Rd. Rittman, OH 44270 330-855-2464 Carl Zollinger, pres.	Zollinger Sand & Gravel Co. (374) (193)	Wayne	sand & gravel clay	54,712 30,000	54,712 30,000	We-15	IM-398

1997 LIMESTONE/DOLOMITE COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Adrian Sand & Stone	1	170,000	250,000	McCarthy Stone Quarry	1	263,659	263,659
Ayers Limestone Quarry, Inc.	1	103,950	103,950	Melvin Stone Co.	3	2,529,716	2,529,716
Barrett Paving Materials, Inc.	2	1,122,000	1,175,000	Miami River Stone Co.	2	577,231	577,431
Belden Brick Co.	2	11,118	11,118	Morrow Gravel Co.	1	162,850	162,850
Belville Mining Co., Inc.	1	10,624	10,624	National Lime & Stone Co.	7	12,049,875	12,215,299
Benchmark Materials	5	3,978,433	4,211,885	North Shore Stone Quarries, Inc.	1	5,270	5,270
Blue Jay Enterprises of Ts. Co., Inc.	1	207	207	Northshore Coal, Inc.	2	35,241	35,241
Bluffton Stone Co.	1	384,270	389,666	Ohio Asphaltic Limestone Corp.	1	465,732	468,500
Central Ohio Coal Co.	1	51,623	51,623	Olen Corp.	1	371,428	480,000
Chesterhill Stone Co.	1	676,496	726,320	Penry Stone Co.	1	458,074	458,074
Christman Quarry	1	89,978	89,978	Piqua Materials, Inc.	1	604,706	642,113
Con-Ag, Inc.	1	236,738	268,378	Pleasant Valley Limestone	1	115,422	115,422
Custar Stone Co.	1	474,645	484,137	C. F. Poeppelman, Inc.	1	365,673	365,673
Davon, Inc.	3	4,231,466	4,360,396	Precision Aggregate, Inc.	1	268,318	277,318
C. E. Duff & Son, Inc.	2	404,621	404,621	Putnam Stone Co.	1	249,633	269,335
ENZ, Inc.	1	113,815	113,815	Quality Stone Co.	1	740,109	740,109
ESSROC Cement Corp.	2	1,821,665	1,821,665	Redland Ohio, Inc.	2	1,530,328	1,599,912
East Fairfield Coal Co.	1	372,991	372,991	Ridge Township Quarry	1	78,968	78,968
R. A. Eberts Co., Inc.	1	257,405	257,405	Rogers Group, Inc.	1	3,157,764	3,157,764
Erie Blacktop, Inc.	1	133,970	133,970	Salt Creek Materials, Inc.	1	20,225	20,225
GenLime Group, L.P.	1	1,240,935	1,377,662	Sands Hill Coal Co., Inc.	1	283,854	283,854
Gottron Bros. Co.	1	89,338	85,257	Seaway Sand & Stone, Inc.	1	179,321	179,321
J. M. Hamilton & Sons Co., Inc.	1	132,310	132,310	Sharon Stone Co.	1	146,779	146,779
Hardin Quarry Co., Inc.	1	276,555	276,555	Shelly Materials	3	1,732,572	1,732,572
Holmes Limestone Co.	1	30,917	30,917	Sidco Development, Inc.	1	356,964	356,964
Honey Creek Stone Co.	1	277,784	353,948	Sidwell Materials	1	487,562	487,562
K.C.C.I.	1	97,576	97,576	Southdown Inc.	3	980,621	960,253
Kellstone, Inc.	1	1,118,000	1,118,000	Spring Creek Corp.	1	399,359	399,359
Kimble Clay & Limestone Co.	1	82,596	82,596	Stoneco, Inc.	7	4,651,888	4,722,021
King Limestone, Inc.	1	373,733	373,733	Suever Stone Co., Inc.	2	278,800	308,431
King Quarries, Inc.	1	27,394	27,394	Tri-County Limestone Co.	1	227,468	227,468
Lafarge Corp.	2	4,673,472	4,273,472	Wagner Quarries Co.	1	2,298,373	2,076,839
Latham Limestone, Inc.	1	374,070	375,800	Waterloo Coal Co., Inc.	1	381,234	381,234
M. C. Trucking Co.	1	398,788	398,789	White Rock Quarry, L.P.	1	1,205,777	1,454,152
MacRitchie Materials, Inc.	1	674,101	680,525	Frank Widmor Coal Co., Inc.	1	352,429	352,429
Maple Grove Stone Co.	1	193,591	193,591	Wyandot Dolomite, Inc.	1	1,933,233	2,034,740
Marshall Quarry, Inc.	1	7,003	7,003	Wysong Stone Co.	1	85,465	85,465
Martin Marietta Aggregates	13	9,753,396	9,665,090	TOTAL: 77 companies	123	77,536,923	78,471,765
Martin Marietta Magnesia Specialties, Inc.	1	2,854,000	2,854,000				
Maxville Quarries, Inc.	2	183,428	177,476				

1997 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Cn-A).

LIMESTONE/DOLOMITE OPERATORS DIRECTORY

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County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Adams	Davon, Inc.	Plum Run	Meigs	Peebles, Greenfield, & Tymochtee Dolomites (Silurian)	crushed stone — unspecified	Ads-1
Allen	Bluffton Stone Co.	Bluffton Stone Co.	Richland	Tymochtee Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphalt, commercial building; dimension stone; aglime	An-1
	National Lime & Stone Co.	Lima Plant	Bath	(Silurian)	crushed stone — riprap, railroad ballast, commercial building	An-3
	Suever Stone Co., Inc.	Suever Stone Co., Inc.	Spencer	Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing, asphalt; aglime	An-4
Athens	R. A. Eberts Co., Inc.	Diamond Stone	Lee		crushed stone — unspecified	As-533
Auglaize	Con-Ag, Inc.	Con-Ag, Inc.	Noble	Cedarville Dolomite (Silurian)	crushed stone — riprap, road construction/resurfacing, asphalt	Ae-31
	National Lime & Stone Co.	Buckland Plant	Moulton	(Silurian)	crushed stone — riprap, commercial building; aglime	Ae-10
Belmont	Ayers Limestone Quarry, Inc.	Ayers Limestone Quarry	Pease	Permian	crushed stone — riprap, road construction/resurfacing	Bt-716
	Frank Widmor Coal Co., Inc.	Bellaire Stone	Pulkrney	Fishpot limestone (Pennsylvanian)	crushed stone — riprap, road construction/resurfacing	Bt-1190
	Northshore Coal, Inc.	Uniontown	Wheeling	Fishpot limestone (Pennsylvanian)	crushed stone — riprap, road construction/resurfacing	Bt-B
		Northshore Limestone	Wheeling	Fishpot limestone (Pennsylvanian)	crushed stone — riprap, road construction/resurfacing	Bt-N
Brown	Davon, Inc.	Eagle Crushed Stone	Eagle	Brassfield Limestone (Silurian)	crushed stone — unspecified	Bn-EC
Clinton	Melvin Stone Co.	Melvin Stone Co.	Richland	Guelph Dolomite (Silurian)	crushed stone — unspecified	Clm-1
Crawford	National Lime & Stone Co.	Bucyrus Plant	Holmes	Devonian	crushed stone — riprap, railroad ballast, flux, commercial building, extenders/fillers; aglime	Cd-1
Darke	Martin Marietta Aggregates	Fort Jefferson #424	Butler	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	Dke-1
Delaware	Martin Marietta Aggregates	Shawnee #225	Concord	Columbus & Delaware Limestones (Devonian)	crushed stone — road construction/resurfacing	Del-4
	National Lime & Stone Co.	Delaware Stone #227	Scioto	Columbus Limestone (Devonian)	crushed stone — road construction/resurfacing	Del-3
	Penry Stone Co.	Radnor Plant	Radnor	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, railroad ballast, commercial building; aglime	Del-5
					crushed stone — unspecified	Del-2
Erie	Erie Blacktop, Inc.	Erie Blacktop Quarry	Margaretta	Columbus Limestone & Detroit River Group (Devonian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing; aglime	Ee-27
	Kellstone, Inc.	Kellstone, Inc.	Kelleys Island	(Devonian)	crushed stone — unspecified	Ee-K
	Rogers Group, Inc. (dba Sandusky Crushed Stone Co.)	Parkertown Quarry	Groton	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphalt, commercial building	Ee-11
	Wagner Quarries Co.	Wagner Quarries Co.	Perkins	upper Columbus & Delaware Limestones (Devonian)	crushed stone — road construction/resurfacing	Ee-1
Fayette	Martin Marietta Aggregates Melvin Stone Co.	Blue Rock Limestone #427 Fayette	Perry Green	Tymochtee Dolomite (Silurian) Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing	Fe-2 Fe-1

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Franklin	Martin Marietta Aggregates	Columbus Limestone #221	Franklin, Jackson, Marion, Norwich	Columbus Limestone (Devonian)	crushed stone — road construction/resurfacing	Fn-53
	Olen Corp.	Marble Cliff #224	Brown	Columbus & Delaware Limestones (Devonian)	crushed stone — road construction/resurfacing	Fn-2
Greene	Martin Marietta Aggregates	Hillard Plant #1		Salina Dolomite (Silurian)	crushed stone — commercial building	Fn-43
	Southdown Inc.	Cedarville Limestone #425	Sugar Creek	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	Ge-17
		Fairborn Limestone #431	Bath	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing	Ge-25
		Miller & Trolinger	Bath	Brassfield Limestone (Silurian)	stone for portland cement manufacture	Ge-8
		Batdorf, Feirstine, Schneider	Beaver Creek	upper Brassfield Limestone (Silurian)	stone for portland cement manufacture	Ge-9
Guernsey	King Limestone, Inc.	King Limestone, Inc.	Spencer	Fishpot limestone (Pennsylvanian)	crushed stone — road construction/resurfacing	Gy-309 ¹
Hancock	Adrian Sand & Stone	Ridge Quarry	Big Lick		crushed stone — portland cement concrete, road construction/resurfacing, commercial building	Hk-A
	National Lime & Stone Co.	Findlay Plant	Liberty	Niagaran dolomite (Silurian)	crushed stone — riprap, railroad ballast, commercial building; aglime	Hk-7
Hardin	C. E. Duff & Son, Inc.	Forest Quarry	Jackson	Niagarian dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, commercial building	Hdn-S
	Hardin Quarry Co., Inc.	Hardin Quarry Co., Inc.	Pleasant	Tymochtee Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, commercial building; aglime	Hdn-2
Harrison	K.C.C.I.	Apex	German		crushed stone — riprap, road construction/resurfacing	Jfn-K ²
Highland	Davon, Inc.	Highland Stone	Hamer	Brassfield & Dayton Limestones (Silurian)	crushed stone — unspecified	Hd-2
	Marshall Quarry, Inc.	Marshall Quarry, Inc.	Marshall		crushed stone — road construction/resurfacing; aglime	Hd-4
	Martin Marietta Aggregates	Lynchburg	Union		crushed stone — road construction/resurfacing	Hd-D
	Ohio Asphaltic Limestone	Ohio Asphaltic Limestone	Union		crushed stone — riprap, road construction/resurfacing, asphalt; aglime	Hd-3
Holmes	Holmes Limestone Co.	241 Plant	Hardy	Putnam Hill limestone (Pennsylvanian)	crushed stone — road construction/resurfacing	Hs-67
Jackson	Sands Hill Coal Co., Inc.	Sands Hill Strip #4	Milton		crushed stone — road construction/resurfacing; aglime	Jkn-SH
	Waterloo Coal Co., Inc.	Bowman Strip-Zoat Quarry	Bloomfield, Madison	Vanport limestone (Pennsylvanian)	crushed stone — unspecified	Jkn-367
Jefferson	K.C.C.I.	Apex	Springfield		crushed stone — riprap, road construction/resurfacing	Jfn-K ³
Lawrence	Belville Mining Co., Inc.	Brady Creek	Washington	Vanport limestone (Pennsylvanian)	crushed stone — unspecified	Le-B
Logan	C. E. Duff & Son, Inc.	C. E. Duff & Son, Inc.	Richland		crushed stone — riprap, portland cement concrete, road construction/resurfacing, commercial building	Lgn-15
	Martin Marietta Aggregates	East Liberty #226	Perry	Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing	Lgn-1
	Shelly Materials	Belle Center Plant #8	Richland		crushed stone — portland cement concrete, road construction/resurfacing, asphalt, commercial building	Lgn-2
Lucas	Barrett Paving Materials, Benchmark Materials	Sylvania Quarry	Sylvania	Detroit River Group (Devonian)	crushed stone — unspecified	Ls-12
		Sylvania	Sylvania		crushed stone — riprap, road construction/resurfacing	Ls-3
		Waterville	Waterville	Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing	Ls-1

Mahoning	Seaway Sand & Stone, Inc. Stoneco, Inc.	Swanton Waynesfield	crushed stone — riprap crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphalt, commercial building	Ls-13 Ls-2
	East Fairfield Coal Co. ESSROC Cement Corp.	Springfield Poland Poland, Springfield Springfield	crushed stone — unspecified stone for portland cement manufacture stone for portland cement manufacture	Mg-631 Mg-608 Mg-EM
Marion	Honey Creek Stone Co.	Marion	crushed stone — unspecified	Mg-54
	J. M. Hamilton & Sons Co., Inc.	Grand Prairie, Marion Grand	crushed stone — road construction/resurfacing, asphalt	Mn-2
Mercer	National Lime & Stone Co.	Tri-County Limestone Co.	crushed stone — riprap, railroad ballast, commercial building; aglime	Mn-3
	Tri-County Limestone Co.	Tri-County Limestone Co.	crushed stone — riprap, portland cement concrete, road construction/resurfacing; aglime	Mn-1
Miami	Morrow Gravel Co.	Dublin	crushed stone — riprap, asphalt	Mr-2
	Stoneco, Inc.	Jefferson	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphalt, commercial building; aglime	Mr-1
Miami	Barrett Paving Materials, Inc. Piqua Materials, Inc.	Union Springcreek	crushed stone — road construction/resurfacing	Mi-BPM Mi-1
	C. F. Poepelman, Inc.	Newberry	crushed stone — riprap, road construction/ resurfacing, flux, extenders/fillers, aglime	Mi-10
Monroe	Christman Quarry	Seneca	crushed stone — road construction/resurfacing, asphalt; aglime	Me-C
	Martin Marietta Aggregates	Clay	crushed stone — road construction/resurfacing	My-1
Montgomery	Southdown Inc.	Madison Wayne Wayne	crushed stone — road construction/resurfacing stone for portland cement manufacture	My-23 My-73 My-58
	Central Ohio Coal Co.	Manchester	crushed stone — road construction/resurfacing	Mon-600
Morgan	Chesterhill Stone Co.	Newton	crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphalt, commercial building; aglime	Mum-106
	King Limestone, Inc.	Rich Hill	crushed stone — road construction/resurfacing	Gy-309 ⁴
Noble	Pleasant Valley Limestone	Hopewell	crushed stone — road construction/resurfacing	Mum-907
	Salt Creek Materials, Inc.	Perry	crushed stone — road construction/resurfacing	Mum-269
Noble	Sidco Development, Inc.	Newton	crushed stone — unspecified	Mum-SD
	Sidwell Materials	Newton	crushed stone — road construction/resurfacing	Mum-SB
Noble	King Quarries, Inc.	Olive	crushed stone — road construction/resurfacing	Ne-K1
	Sharon Stone Co.	Noble, Sharon	crushed stone — road construction/resurfacing	Ne-S
Ottawa	GenLime Group, L.P.	Clay	crushed stone — road construction/resurfacing; lime (burned stone)—building, chemical and industrial	Oa-1
	Lafarge Corp.	Danbury	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphalt, commercial building	Oa-7
Ottawa	Stoneco, Inc.	Benton	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphalt, commercial building	Oa-14

¹See also Muskingum County.²See also Jefferson County.³See also Harrison County.⁴See also Guernsey County.

1997 OHIO DIRECTORY OF LIMESTONE/DOLOMITE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Ottawa (cont.)	White Rock Quarry, L.P.	White Rock Quarry	Allen	Guelph Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphalt, commercial building, extenders/fillers; aglime	Oa-6
Paulding	Benchmark Materials	Paulding	Crane	Tennile Creek Dolomite (Devonian)	crushed stone — riprap, road construction/resurfacing; aglime	Pg-7
	Lafarge Corp.	Paulding Quarry	Crane	Detroit River Group & Dundee Limestone (Devonian)	stone for portland cement manufacture	Pg-1
	Stoneco, Inc.	Auglaize Quarry	Auglaize	Detroit River Group & Dundee Limestone (Devonian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, flux, asphalt, commercial building; aglime	Pg-2
Perry	Maxville Quarries, Inc.	Carpenter Downhour	Monday Creek Monday Creek	Maxville Limestone (Mississippian) Maxville Limestone (Mississippian)	crushed stone — road construction/resurfacing	Py-235 ⁵ Py-343 ³
Pickaway	Melvin Stone Co.	Williamsport	Perry	Columbus Limestone (Devonian)	crushed stone — unspecified	Pky-4
Pike	Latham Limestone, Inc.	Latham Limestone, Inc.	Mifflin	Greenfield Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphalt; aglime	Pke-13
Preble	Wysong Stone Co.	Wysong Stone Co.	Twin	Brassfield Limestone (Silurian)	crushed stone — riprap, road construction/resurfacing; dimension stone	Pre-5
Putnam	Putnam Stone Co.	Putnam Stone Co.	Pleasant, Riley	Silurian	crushed stone — riprap, portland cement concrete, railroad ballast	Pm-2
Ross	M. C. Trucking Co.	M. C. Trucking	Concord		crushed stone — unspecified	Rs-MC1
Sandusky	Gottron Bros. Co.	Gottron Bros. Co.	Sandusky	Niagaran dolomite (Silurian)	crushed stone — portland cement concrete, road construction/resurfacing, commercial building, extenders/fillers	Sy-5
Seneca	Martin Marietta Magnesia Specialties, Inc. Redland Ohio, Inc.	Woodville Quarry Woodville Plant	Woodville Woodville	Guelph Dolomite (Silurian) Niagaran dolomite (Silurian)	crushed stone — aggregate; lime (burned stone) — chemical and industrial crushed stone — road construction/resurfacing; flux; extenders/fillers; aglime; lime (burned stone) — chemical and industrial	Sy-1 Sy-3 ⁶
	Benchmark Materials	Bloomville	Bloom	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, road construction/resurfacing, aglime	Sa-3
	Maple Grove Stone Co.	Flat Rock Maple Grove Stone Co.	Thompson Liberty	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, road construction/resurfacing; aglime crushed stone — portland cement concrete, road construction/resurfacing, asphalt, commercial building	Sa-1 Sa-2
Shelby	North Shore Stone Quarries, Inc.	North Shore Stone Quarries, Inc.	Thompson		crushed stone — riprap, dimension stone	Sa-8
	Miami River Stone Co.	Miami River Stone Co.	Orange	Cedarville Dolomite (Silurian)	crushed stone — road construction/resurfacing; dimension stone	Shy-6
	Spring Creek Corp.	Rock Run Quarry River Quarry	Washington Clinton		crushed stone — road construction/resurfacing, commercial building	Shy-16 ⁷ Shy-15
Stark	ENZ, Inc.	Sickafoose-Fox Pit	Pike, Sandy		crushed stone — riprap, road construction/resurfacing	Sk-208
Tuscarawas	Belden Brick Co.	Moomaw Pit Shanesville Pit	Sugar Creek Sugar Creek	Vanport limestone (Pennsylvanian)	crushed stone — riprap	Ts-1517 Ts-1939
	Blue Jay Enterprises of Ts. Co., Inc. Kimble Clay & Limestone Co.	Swonger Pit Kimble Clay & Limestone Co.	Sandy Dover	Vanport limestone (Pennsylvanian)	crushed stone — riprap	Ts-520 Ts-1818
					crushed stone — riprap, road construction/resurfacing	

Union	Shelly Materials	Ostrander Plant #10 York Center #11	Mill Creek York	Columbus Limestone (Devonian)	crushed stone — unspecified crushed stone — portland cement concrete, road construction/resurfacing, asphalt, commercial building	Un-2 Un-1
Van Wert	Ridge Township Quarry Stoneco, Inc.	Ridge Township Quarry Scott Quarry	Ridge Union	Tymochtee Dolomite (Silurian)	crushed stone — unspecified crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphalt, commercial building; aglime	Vt-7 Vt-3
Vinton	Suever Stone Co., Inc.	Delphos Plant	Washington	Tymochtee Dolomite (Silurian)	crushed stone — portland cement concrete, road construction/resurfacing, asphalt	Vt-1
Wood	Quality Stone Co. Custar Stone Co. MacRitchie Materials, Inc. Precision Aggregate, Inc. Stoneco, Inc.	Route 32 Custar MacRitchie Materials, Inc. Precision Aggregate II Lime City Quarry	Clinton Milton Perry Portage Perrysburg	Lockport & Salina Dolomites (Silurian)	crushed stone — unspecified crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphalt; aglime crushed stone — unspecified	Vn-193 Wd-5 Wd-1
		Portage Quarry	Portage	Greenfield & Lockport Dolomites (Silurian)	crushed stone — portland cement concrete, asphalt, commercial building, extenders/fillers crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphalt, commercial building; aglime crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphalt, commercial building; aglime	Wd-14 Wd-6 Wd-11
Wyandot	McCarthy Stone Quarry National Lime & Stone Co. Wyandot Dolomite, Inc.	McCarthy Stone Quarry Carey Plant Wyandot Dolomite, Inc.	Pitt Crawford Crawford	Bass Islands Group (Silurian) Greenfield & Lockport Dolomites (Silurian) Greenfield & Guelph Dolomites (Silurian)	crushed stone — road construction/resurfacing, asphalt crushed stone — riprap, railroad ballast, flux, commercial building, extenders/fillers; aglime; lime (burned stone) — chemical and industrial crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphalt, commercial building; aglime	Wt-3 Wt-1 Wt-8

⁵Production only at Py-343; sales only at Py-235.
⁶Information for Sy-3 includes information for Sy-4.
⁷Production only; no sales.

1997 SAND AND GRAVEL COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
A-1 All Ohio Sand & Gravel Co.	1	86,442	86,442	David E. Edgington	1	2,656	2,656
ATS Enterprises	1	378,401	381,032	Embro, Inc.	1	103,852	103,852
Agg Rok Materials	1	470,931	470,931	Enon Washed Sand & Gravel Co.	1	295,922	295,255
William Albert, Inc.	1	16,922	18,547	Erie Blacktop, Inc.	1	60	60
Alden Sand & Gravel Co.	1	14,587	14,587	Erie Materials, Inc.	1	425	0
Allgeier & Son, Inc.	1	105,000	105,000	Erie Sand & Gravel Co.	1	16,922	16,922
American Sand & Gravel, Inc.	2	1,094,720	1,094,720	Feikert Sand & Gravel, Inc.	1	136,207	136,207
Apache Aggregate & Paving Co.	2	110,925	130,946	Fenner Sand & Gravel, Inc.	1	104,000	104,000
Ashcraft Sand & Gravel, Inc.	1	84,094	84,094	Fleming Construction Co., Inc.	2	14,440	14,489
Atlas Towing Co.	1	65,980	65,980	Flesher Sand & Gravel, Inc.	1	4,146	4,146
B & L Sand Co.	1	46,409	46,409	Foureman's Sand & Gravel, Inc.	1	74,156	74,156
Baker Sand, Inc.	1	552,813	552,811	Friendsville Sand, L.P.	1	36,146	36,146
Barrett Paving Materials, Inc.	2	769,724	1,001,329	Frye Sand & Gravel, Inc.	1	2,107	2,107
Bartley & Bolin Excavating	2	121,547	121,547	Ganges Gravel Co.	1	28,389	28,389
Beaver Excavating, Inc.	1	2,000	2,000	John L. Garber Materials, Inc.	1	298,356	298,356
Beck Sand & Gravel, Inc.	1	225,647	225,647	Al Gasser Excavating, Inc.	1	2,500	2,500
Paul D. Beery Trucking Co.	1	7,790	780	Joyce A. Good	1	5,571	0
Beverly Slag Co.	1	1,275	1,275	Goshen Sand & Gravel	1	58,123	70,223
Big T Mining	1	2,648	6,000	James D. Graham	1	101,317	101,317
Big Walnut Sand & Gravel, Inc.	1	39,568	39,568	Green Oaks Potting Products, Inc.	1	103	103
Black Top Contracting, Inc.	1	28,595	28,595	Grimes Excavating	1	127,000	127,000
E. E. Blair Construction Co.	1	121,591	121,591	Guy Schieve	1	5,648	5,648
Gaston Bowling, Inc.	1	7,890	7,890	Harrison Sand & Gravel Co.	1	81,474	86,090
D. H. Bowman & Sons, Inc.	1	48,999	70,818	Haubeil & Sons Asphalt & Materials, Inc.	1	114,461	114,461
Boyd Excavating	1	4,560	4,560	Haueter Sand & Gravel, Inc.	1	271,608	271,608
Briggs Sand & Gravel, Inc.	1	17,280	17,280	Heer Excavating, Inc.	1	10,204	10,204
Broadway Sand & Gravel, Inc.	1	45,828	45,828	Heiser Sand & Gravel Co.	1	47,170	47,170
Broshear Contractors, Inc.	1	17,773	17,773	Hilltop Aggregate, Inc.	1	362,503	362,503
Karl Brugmann Sand & Gravel, Inc.	1	304,388	304,388	Hilltop Basic Resources, Inc.	2	1,514,019	1,319,682
Oscar Brugmann Sand & Gravel, Inc.	1	585,320	635,000	Hocking Valley Concrete, Inc.	1	84,524	90,000
Buckeye Excavating Development, Inc.	1	20,335	20,335	Hocking Valley Mulch	1	2,652	2,652
James Bunnell, Inc.	2	854,707	854,707	William A. Hoffman, Jr.	1	3,491	3,491
C.I.R., Inc.	1	3,433	3,433	Hollinger Excavating	1	1,794	1,794
Canton Aggregate	4	1,166,036	1,166,036	Hugo Sand Co.	1	210,721	210,721
Joe E. Carter	1	200	400	Inland South Aggregates	1	71,213	80,213
Carter & Carter, Inc.	1	1,556	1,556	JP Sand & Gravel Co.	1	439,663	439,663
Chesterhill Stone Co.	1	199,459	198,929	Jarrett Sand Co.	1	3,290	3,290
Chesterville Sand & Gravel Co., Inc.	1	167,045	167,045	Jaymar, Inc.	1	193,358	193,358
Clemson Excavating, Inc.	1	69,777	69,777	Jefferson Materials Co.	1	364,700	376,900
M. J. Coates Construction Co.	1	70,081	70,081	Joseph Sand & Gravel, Inc.	1	806	806
Cochran Transportation Services, Inc.	1	28,682	28,682	Keener Sand & Clay Co.	1	597	597
Bill D. Colwell	1	20,776	20,776	Kilbarger Construction, Inc.	1	200	200
Complete Resources Co.	1	164,470	181,007	Kinsman Sand & Gravel Co.	1	79,755	79,755
County Line Concrete & Supply Co.	1	111,895	320,416	Kipp's Gravel Co., Inc.	1	133,128	133,128
Craigton Shale Co.	1	6,774	6,774	Kirby's Sand & Gravel, Inc.	1	120,804	121,164
Cremeans Concrete & Supply	1	2,130	2,130	T & K Kuhnle Co.	1	54,744	54,744
Crosby Gravel	1	470	470	L & I Natural Resources, Inc.	1	165,967	165,967
R. A. Cruise Sand & Gravel, Inc.	1	56,295	56,296	Lafarge Corp.	1	908,245	902,727
D & K Materials, Inc.	1	30,218	30,218	Lake Hope Asphalt, Inc.	1	23,014	30,600
D.G.M., Inc.	1	6,778	6,778	Lakeside Sand & Gravel Co.	2	355,413	355,413
Darby Creek Excavating	1	0	5,000	LaMar Sand & Fill, Ltd.	1	2,000	2,000
Davon Inc.	1	692,518	662,974	Leonard Sand & Gravel	1	0	1,000
Demmy Construction, Inc.	1	45,983	45,983	Link Trucking Co.	1	27,019	28,579
Demmy Sand & Gravel	1	5,932	5,932	Little Miami Sand & Gravel	2	4,000	4,000
A. J. Diana Sons, Inc.	1	8,000	10,000	Loxley Aggregates, Inc.	1	3,200	3,200
Dingledine Basic Materials, Inc.	1	81,789	81,789	Lucky Sand & Gravel Co.	1	90,822	90,822
Don's Dozer Service, Inc.	1	2,407	2,407	M & J Sand & Gravel, Inc.	1	4,907	4,907
James E. Downard	1	248	248	Al Mackey Enterprises, Inc.	1	35,812	35,812
C. E. Duff & Son, Inc.	3	141,263	141,263	Martin Marietta Aggregates	16	11,601,542	11,407,207
E. A. Construction, Inc.	1	3,650	3,650	R.J. Martin Service & Excavating	1	941	0

1997 SAND AND GRAVEL COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Mason's Sand & Gravel Co.	1	91,538	91,538	Seville Sand & Gravel, Inc.	1	304,270	304,270
Massillon Materials, Inc.	1	772,745	772,745	Shady Bend Sand & Gravel	1	114,295	114,295
Mathews Sand & Gravel	1	910	910	Shamrock Materials, Inc.	1	574,036	574,036
Mecco, Inc.	1	330,210	346,800	Shelly Materials	10	3,659,321	3,659,321
Mechanicsburg Sand & Gravel, Inc.	1	169,552	169,552	R. W. Sidley, Inc.	2	123,000	123,000
Meigs County Commissioners	1	34,380	34,380	Simak Trucking, Inc.	1	52,745	52,745
Melvin Stone Co.	1	299,378	299,378	Sleepy Hollow Sand & Gravel	1	59,468	82,000
Menuet Bros. Sand & Gravel, Inc.	1	181,428	181,428	Small's Sand & Gravel, Inc.	3	269,301	269,301
Miami River Stone Co.	2	52,474	52,474	Sober Sand & Gravel Co.	1	2,200	2,200
Miller Bros. Gravel, Inc.	1	289,859	236,162	Soehnlén Bros. Sand & Gravel, Inc.	1	93,856	95,277
Miller Sand & Gravel, Inc.	1	2,610	2,610	Solomon's Mines, Inc.	2	78,655	78,655
Moore's Excavating Co.	2	100,067	100,067	Solon Excavators Sand & Gravel, Inc.	2	321,358	321,358
Moraine Materials Co., Inc.	2	333,278	333,278	Soltis Sand & Gravel	1	4,098	4,098
Morrow Gravel Co.	3	358,500	358,500	South Central Sand & Gravel	1	219,774	219,774
Muskingum River Gravel Co.	5	625,650	601,606	Southern Ohio Aggregates, Inc.	2	100,000	100,000
National Aggregates, Inc.	1	418,967	418,967	Spring Creek Corp.	2	444,554	444,554
National Lime & Stone Co.	3	518,189	501,417	Spring Run Gravel	1	30,433	30,433
Neer's Sand & Gravel	1	236,417	279,734	Stewart & Reichman, Inc.	1	74,551	74,551
Nelson Sand & Gravel, Inc.	1	40,110	40,110	Stocker Sand & Gravel Co.	2	1,252,993	1,252,993
New Carlisle Sand & Gravel Co.	1	714	714	Stoneco, Inc.	1	198,037	153,251
Newbury Sand & Gravel	1	34,510	34,510	Sunshine Sand Co.	1	2,318	2,318
Newton Asphalt Paving, Inc.	1	99,534	99,534	T. K. Stone Co., Inc.	1 ¹	2,073	2,073
Nick's Trucking	1	8,400	8,400	Tackett Builders	1	896	896
Andy Nixon Contractors, Inc.	1	960	960	Taylorville Rd. Hardfill	1	10,688	10,688
Northern Ohio Paving Co.	1	319,804	375,900	Teague Gravel Co., Inc.	1	63,044	63,044
Carl E. Oeder & Sons Sand & Gravel	1	516,781	516,781	Thiel Construction Co.	1	7,228	7,228
Ohio-West Virginia Excavation	1	5,876	5,876	Tipp Stone Co., Inc.	2	74,177	74,177
Olen Corp.	5	3,771,199	4,030,764	Tri-State Asphalt Products	1	21,832	0
Oneida Sand & Gravel, Inc.	1	87,657	87,657	Trout Sand & Gravel Co.	1	42,510	43,188
Osborne Materials Co.	1	135,470	135,470	Tuffco Sand & Gravel, Inc.	1	163,144	163,144
Oster Sand & Gravel, Inc.	3	908,440	908,440	Twinsburg Development Corp	1	109,506	109,506
Ours Sand & Gravel	1	9,765	9,765	Valley Materials Co.	1	62,578	73,992
Penry Stone Co.	1	15,383	15,383	Valley Sand & Gravel, Inc.	1	43,623	43,623
Phillips Sand & Gravel	1	458,395	458,395	John Van Horn Trucking	1	402	402
Powell Gravel & Topsoil, Inc.	1	663,466	663,466	Van Wey Sand & Gravel, Inc.	1	730,473	751,605
Prairie Lane Sand & Gravel Co.	1	237,325	237,325	Ralph C. Wagner & Sons	1	250	250
Precision Aggregate, Inc.	1	59,055	127,055	Wallace Road Sand & Gravel	1	4,800	5,500
Quality Ready Mix, Inc.	1	46,147	46,147	Carl Walter	1	4,620	4,620
Rack Sand, Inc.	1	79,000	79,000	Ward Materials, Inc.	1	44,173	39,543
Rainbow Sand & Gravel, Inc.	1	108,834	107,373	Watson Gravel, Inc.	4	2,415,792	2,415,792
John P. Raisch, Inc.	1	4,969	4,969	Weber Sand & Gravel, Inc.	1	299,705	299,705
Red Brush Peat Co.	1	1,303	1,303	Welch Sand & Gravel, Inc.	3	1,057,992	1,057,992
Ries Sand & Gravel	1	1,311	1,311	Mark Williams Blacktop Co., Inc.	2	50,275	20,000
Gary Roberts Excavating	1	6,307	6,307	Willowbrook	1	30,331	30,331
Rockwell Sand & Gravel, Inc.	1	323,028	323,028	Gene T. Wilson	1	1,008	1,008
Ross County Gravel Co.	1	55,231	0	Wise Gravel	1	1,215	1,215
Rubber City Sand & Gravel Co.	1	61,496	61,496	Wysong Gravel Co.	2	320,128	320,129
Rupp Construction, Inc.	1	398,313	398,313	X L Sand & Gravel	1	60,225	60,225
S. & M. Builders, Inc.	1	98,797	98,797	Xenia Sand, Gravel, & Asphalt Co.	1	300	300
S & S Aggregate, Inc.	4	575,095	587,389	Young's Sand & Gravel Co.	3	374,381	374,381
S & S Transport, Inc.	1	95,073	95,073	Zollinger Sand & Gravel Co.	1	54,712	54,712
Salt Creek Materials, Inc.	1	30,232	0				
Samco, Inc.	1	378,381	378,381	TOTAL: 231 companies	306	57,251,127	57,755,539
Sandco, Inc.	1	14,935	30,000				
Sandman Sand & Stone, Inc.	1	62,639	62,639				
Sant Sand & Gravel, Inc.	1	197,846	274,330				
Schloss Materials Co.	1	80,102	80,102				
Scioto Valley Resources	1	174,519	178,543				
Mark E. Scott	1	40,000	40,000				
Seaway Sand & Stone, Inc.	1	46,868	46,868				

¹This mine was operated by Moore's Excavating Co. in the last half of 1997 and is not included in the total number of mines.



A truck preparing to spray water for dust suppression on the access road at the Hilltop Basic Resources Fairborn Plant.

1997 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Ald-G).

SAND AND GRAVEL OPERATORS DIRECTORIES

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County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Allen	Ward Materials, Inc.	Ward Materials, Inc.	Monroe	sand — fill, landscaping gravel — road construction/resurfacing, filtration, fill, landscaping	An-15
Ashland	Bartley & Bolin Excavating	Simington Rd.	Montgomery	sand — building gravel — building	Ald-16
	Joyce A. Good Ries Sand & Gravel	Joyce A. Good Ries Sand & Gravel	Jackson Mohican	gravel — bank run sand — building, road construction/resurfacing	Ald-G Ald-9
	Young's Sand & Gravel Co.	Sprang	Green	gravel — building, road construction/resurfacing	Ald-7
		Young's Sand & Gravel Co.	Green	sand — building, road construction/resurfacing, unspecified sand — building, road construction/resurfacing, unspecified	Ald-15
		Young's Sand & Gravel Co.	Green	gravel — building, road construction/resurfacing, unspecified gravel — building, road construction/resurfacing, unspecified	Ald-Y
Ashtabula	Clemson Excavating, Inc.	Clemson	Hartsgrove	sand — new home construction gravel — driveways & septic	Asa-C
	Frye Sand & Gravel, Inc. Kinsman Sand & Gravel Co.	Frye Sand & Gravel, Inc. Kinsman Sand & Gravel Co.	Denmark Wayne	gravel — bank run sand — unspecified gravel — unspecified	Asa-10 Asa-20
	Mathews Sand & Gravel	Mathews Sand & Gravel	North Kingsville	sand — building gravel — building	Asa-M
	Nelson Sand & Gravel, Inc.	Nelson Sand & Gravel, Inc.	North Kingsville	sand — building gravel — building	Asa-N
	R. W. Sidley, Inc.	Conneaut Pit	Kingsville	sand — building, portland cement concrete, filtration, fill	Asa-15
	Simak Trucking, Inc.	Simak Trucking, Inc.	Kingsville	gravel — filtration, drainage sand — building, road construction/resurfacing, filtration, ice grits gravel — building, road construction/resurfacing, filtration	Asa-18
Athens	Black Top Contracting, Inc. Cochran Transportation Service, Inc.	Black Top #1 Cochran Transportation Service, Inc.	Rome Dover	sand — asphaltic concrete, road construction/resurfacing sand — building gravel — building	As-588 As-595
	Lake Hope Asphalt, Inc.	Lake Hope Asphalt, Inc.	York	sand — asphaltic concrete, unspecified gravel — asphaltic concrete, unspecified	As-1161
	Olen Corp.	Stewart Plant #4	Rome	sand — portland cement concrete, road construction/resurfacing gravel — building	As-W
Auglaize	Joseph Sand & Gravel, Inc. National Lime & Stone Co.	Joseph Sand & Gravel, Inc. Wapakoneta Plant	Union Union	gravel — fill sand — building, portland cement concrete gravel — portland cement concrete	Ae-23 Ae-30
	Quality Ready Mix, Inc.	Quality Pit	Pusheta	sand — portland cement concrete gravel — portland cement concrete	Ae-16
Belmont	Tri-State Asphalt Products	Tri-State Asphalt Products	Meade	sand — asphaltic concrete gravel — asphaltic concrete, road construction/resurfacing	Bt-74
Butler	Gaston Bowling, Inc. Broshear Contractors, Inc.	Indian Creek Sand & Gravel Co. Ross Twp. Gravel	Ross Ross	gravel — building, road construction/resurfacing, bank run sand — unspecified gravel — unspecified	Br-40 Br-48
	Bill D. Colwell Dingledine Basic Materials, Inc.	Sipps Lane Dingledine Basic Materials, Inc.	St. Clair Milford	gravel — road construction/resurfacing sand — asphaltic concrete, fill	Br-36 Br-50
	Martin Marietta Aggregates	Fairfield #711	Fairfield	gravel — building, road construction/resurfacing, filtration, fill sand — road construction/resurfacing	Br-35
		Ross	Ross	gravel — road construction/resurfacing sand — road construction/resurfacing	Br-29
		Hamilton #710	St. Clair	gravel — road construction/resurfacing gravel — road construction/resurfacing	Br-5

1997 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Butler (cont.)	Mecco, Inc.	Mecco, Inc.	Lemon	sand — building, portland cement concrete, asphaltic concrete gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Br-15
	Moraine Materials Co., Inc.	Middletown	Madison	sand — unspecified gravel — unspecified	Br-6
	Shamrock Materials, Inc.	Shamrock Materials, Inc.	Madison	sand — portland cement concrete, fill gravel — building, portland cement concrete, road construction/ resurfacing, filtration, roofing	Br-52
	Watson Gravel, Inc.	Watson Pit	Fairfield	sand — building, portland cement concrete, asphaltic concrete, fill gravel — building, portland cement concrete, road construction/ resurfacing	Br-47
Carroll	Welch Sand & Gravel, Inc.	River Pit	Fairfield	sand — building, asphaltic concrete gravel — building, asphaltic concrete	Br-57
		Schlichter Pit	Fairfield	sand — building gravel — building	Br-38
	Oneida Sand & Gravel, Inc.	Oneida Sand & Gravel, Inc.	Brown	sand — road construction/resurfacing gravel — road construction/resurfacing	Cl-204
	Mechanicsburg Sand & Gravel, Inc.	Mechanicsburg Sand & Gravel, Inc.	Union	sand — unspecified gravel — unspecified	Cpn-22
Champaign	Moore's Excavating Co.	Moore's Excavating Co.	Salem	sand — building gravel — building	Cpn-20
		Moore's Excavating Co.	Wayne	sand — building gravel — building	Cpn-25 ¹
	Morrow Gravel Co.	Urbana #215	Urbana	sand — portland cement concrete, fill gravel — portland cement concrete, road construction/resurfacing, filtration, base	Cpn-1
	T. K. Stone Co., Inc.	T. K. Stone Co., Inc.	Wayne	sand — unspecified gravel — unspecified	Cpn-25 ¹
Clark	Barrett Paving Materials, Inc.	Fairborn #141	Mad River	sand — building, asphaltic concrete gravel — building, portland cement concrete, road construction/ resurfacing	Ck-28
	Demmy Construction, Inc.	Pit II	Mad River	sand — utility line backfill gravel — road construction/resurfacing	Ck-501
	Demmy Sand & Gravel	Demmy Sand & Gravel	Mad River	sand — building gravel — building, portland cement concrete, asphaltic concrete	Ck-502
	Enon Washed Sand & Gravel Co.	Enon Washed Sand & Gravel Co.	Bethel	sand — building, portland cement concrete, asphaltic concrete, fill gravel — building, portland cement concrete, asphaltic concrete	Ck-3
Clermont	Hilltop Basic Resources, Inc.	Fairborn Aggregate Plant	Bethel	sand — portland cement concrete, asphaltic concrete, fill gravel — portland cement concrete, asphaltic concrete, fill	Ge-4 ²
	Martin Marietta Aggregates	Fairborn #413	Bethel	sand — road construction/resurfacing gravel — road construction/resurfacing	Ck-13
	Shelly Materials	Springfield Plant #3	Springfield	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	Ck-25
	Barrett Paving Materials, Inc.	Perintown	Union	sand — unspecified gravel — unspecified	Ct-9
Columbiana	Kipp's Gravel Co., Inc.	Kipp's Gravel Co., Inc.	Stonelick	sand — unspecified gravel — unspecified	Ct-7
	Inland South Aggregates	Inland South Aggregates	Middleton	sand — asphaltic concrete gravel — road construction/resurfacing	Ca-351
	Solomon's Mines, Inc.	Solomon's Mines, Inc. #2	Salem	sand — building, filtration gravel — building, road construction/resurfacing, filtration	Ca-S ³
	Carl Walter	Walter Pit	West	sand — fill gravel — fill	Ca-W
	Willowbrook	Willowbrook	Elk Run	sand — unspecified gravel — unspecified	Ca-993

[illegible]

This mine was operated January through May 1997 by T. K. Stone Co., Inc. and June through December 1997 by Moore's Excavating Co.,

²²See also Greene County.

³Information for Ca-S includes information for Mg-632.

1997 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Geauga	Haueter Sand & Gravel, Inc.	Haueter Sand & Gravel, Inc.	Burton, Newbury	sand — building, portland cement concrete	Gea-29
	T & K Kuhnle Co.	T & K Kuhnle Co.	Auburn	gravel — filtration, unspecified sand — building	Gea-TK
	Newbury Sand & Gravel	Newbury Sand & Gravel	Newbury	gravel — building	Gea-N
	Solon Excavators Sand & Gravel, Inc.	May	Auburn	sand — building, asphaltic concrete	Gea-43
	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman	gravel — building	Gea-9
Greene	Teague Gravel Co., Inc.	Teague Gravel Pit	Newbury	sand — fill sand	Gea-35
	M. J. Coates Construction Co.	M. J. Coates Construction Co.	Spring Valley	gravel — bank gravel	
	James D. Graham	Graham Pit	Spring Valley	sand — building, portland cement concrete, filtration	
	Hilltop Basic Resources, Inc.	Fairborn Aggregate Plant	Bath	gravel — building	Ge-47
	R.J. Martin Service & Excavating	Horseshoe Bend Sand & Gravel	Spring Valley	sand — building, portland cement concrete, asphaltic concrete	Ge-G
	Martin Marietta Aggregates	Haines Rd. #419	Beaver Creek	gravel — portland cement concrete, asphaltic concrete, fill	Ge-4 ^a
	Phillips Sand & Gravel	Xenia #414	Beaver Creek	gravel — pit run	Ge-40
	Watson Gravel, Inc.	Spring Valley Gravel #434	Spring Valley	sand — road construction/resurfacing	Ge-32
		Phillips Sand & Gravel	Beaver Creek	gravel — road construction/resurfacing	Ge-33
		Spring Valley	Spring Valley	sand — road construction/resurfacing	Ge-42
		Xenia Sand, Gravel, & Asphalt Co.	Xenia	gravel — road construction/resurfacing	Ge-36
		Pit 1	Miami	sand — unspecified	Ge-38
Hamilton	Allgeier & Son, Inc.	Ashcraft Sand & Gravel, Inc.	Whitewater	sand — building, portland cement concrete, asphaltic concrete, fill	Ge-10
	Ashcraft Sand & Gravel, Inc.	James Bunnell, Inc.	Harrison	gravel — building	Hmn-AS1
		James Bunnell, Inc.	Whitewater	gravel — unspecified	Hmn-54
	Joe E. Carter	Lost Bridge	Whitewater	sand — unspecified	Hmn-50
	Crosby Gravel	Crosby Gravel	Whitewater	sand — unspecified	Hmn-59
	Harrison Sand & Gravel Co.	Harrison Sand & Gravel Co.	Crosby	gravel — building	Hmn-JC
		Leonard Sand & Gravel	Crosby	sand — road construction/resurfacing	Hmn-44
		Martin Marietta Aggregates	Harrison	gravel — road construction/resurfacing	Hmn-17
		Powell Gravel & Topsoil, Inc.	Symmes	sand — building, portland cement concrete, road construction/resurfacing, filtration, ice control	
		Rack Sand, Inc.	Whitewater	gravel — building, portland cement concrete, road construction/resurfacing, filtration	
		Southern Ohio Aggregates, Inc.	Crosby, Whitewater	sand	Hmn-67 ^s
			Crosby, Whitewater	gravel	Hmn-D
			Harrison	sand — road construction/resurfacing	Hmn-37
			Symmes	gravel — road construction/resurfacing	Hmn-5
			Whitewater	sand — road construction/resurfacing	Hmn-71
			Mill Creek	gravel — unspecified	Hmn-10
			Colerain	sand — building	Hmn-S
			Whitewater	sand — fill	Hmn-SO

Highland	Watson Gravel, Inc.	Harrison Pit	Whitewater	sand — building, portland cement concrete, asphaltic concrete, fill gravel — building, portland cement concrete, road construction/resurfacing	Hmn-60
	Welch Sand & Gravel, Inc.	East Miami Pit	Colerain	sand — building	Hmn-48
		Fernald Pit	Crosby	gravel — building	Hmn-42
Hocking	LaMar Sand & Fill, Ltd.	LaMar Pit	New Market	gravel — building	Hd-L
	Hocking Valley Concrete, Inc.	Hocking Valley Concrete, Inc.	Green	sand — fill	Hg-262
	Hocking Valley Mulch	Sheets Pit	Falls	sand — portland cement concrete, fill gravel — portland cement concrete, road construction/resurfacing, fill	Hg-HV
Holmes	Kilbarger Construction, Inc.	Kilbarger Gravel Pit	Falls	sand — bank run	Hg-329
	Muskingum River Gravel Co.	S & S #8	Green, Starr	gravel — road construction/resurfacing	Hg-301
				sand — asphaltic concrete, road construction/resurfacing, unspecified gravel — building, asphaltic concrete, road construction/resurfacing, unspecified	
	Craigton Shale Co.	Lakeville Sand & Gravel	Washington	gravel — building	Hs-C
	Feikert Sand & Gravel, Inc.	Feikert Sand & Gravel, Inc.	Salt Creek	sand — farm	Hs-511
				gravel — building, portland cement concrete, road construction/resurfacing	
	Menuez Bros. Sand & Gravel, Inc.	Fair Pit	Hardy	gravel — building, portland cement concrete, road construction/resurfacing	Hs-82
	S & S Transport, Inc.	Patterson	Prairie	sand — portland cement concrete, asphaltic concrete, filtration, ice control	Hs-J
	Spring Run Gravel	Spring Run Gravel	Killbuck, Monroe	gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing	Hs-96
Huron	John Van Horn Trucking	John Van Horn Trucking	Washington	sand — asphaltic concrete	Hs-VH
	Erie Blacktop, Inc.	Erie Blacktop Sand & Gravel Pit	Norwalk	gravel — building, asphaltic concrete, road construction/resurfacing	Hrn-16
	Olen Corp.	Fredericktown Plant #2	Morris	sand — unspecified gravel — bank run	Kx-16
Knox	Sant Sand & Gravel, Inc.	Sant Sand & Gravel, Inc.	Clinton	sand — sports field	Kx-3
	Shelly Materials	Mt. Vernon Plant #4	Clinton	sand — portland cement concrete, asphaltic concrete gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Kx-7
	Small's Sand & Gravel, Inc.	Killduff Rd.	Harrison	sand — building	Kx-15
Lake		Zion Rd.	Harrison	gravel — building, road construction	Kx-17
		Mickley Pit	Union	sand — unspecified gravel — unspecified	Kx-5
	C.I.R., Inc.	Harmon	Madison	gravel — backfill	Lke-CIR
Lake Erie	R. W. Sidley, Inc.	Painesville Pit	Painesville	sand — building, portland cement concrete, fill gravel — drainage	Lke-7
	Erie Sand & Gravel Co.	Erie Sand & Gravel Co.	Vermilion-Lorain area "A"	sand — building	Es-dredge
	Osborne Materials Co.	Osborne Materials Co.	Fairport	sand — building, portland cement concrete, asphaltic concrete, filtration	Ld-dredge
Lawrence	B & L Sand Co.	B & L Sand Co.	Perry	sand — industrial sand	Le-430

⁴See also Clark County.⁵Production only, no sales.

1997 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Licking	Olen Corp.	St. Louisville Plant #5	Washington	sand — portland cement concrete, asphaltic concrete, gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Lg-31
	Gary Roberts Excavating	Gary Roberts Excavating	Madison	sand — driveway base	Lg-504
	Sleepy Hollow Sand & Gravel	Sleepy Hollow Pit	Madison	gravel — driveway base	Lg-S
	Van Wey Sand & Gravel, Inc.	Van Wey Sand & Gravel, Inc.	Newton	sand — building gravel — building sand — building gravel — building	Lg-10
Logan	Boyd Excavating	Woodard Pit	Monroe	sand — asphaltic concrete	Lgn-B
	C. E. Duff & Son, Inc.	Portable	Jefferson	gravel — building	Lgn-12
	Neer's Sand & Gravel	Bellefontaine	Lake	sand — building	Lgn-36
		Duff Sand Co.	Washington	sand — filtration	Lgn-31
Lorain	Guy Schieve	Neer's Sand & Gravel	Union	sand — building, portland cement concrete	Lgn-6
				sand — unspecified	
		Schieve Pit	Henrietta	gravel — unspecified	
				sand — building	Ln-12
Lucas	S. & M. Builders, Inc. Sandman Sand & Stone, Inc. Seaway Sand & Stone, Inc.	S. & M. Builders Pit	Sylvania	sand — unspecified	Ls-SMB
		Archbold-Whitehouse Pit	Providence	sand — building	Ls-MH
Madison	Tuffco Sand & Gravel, Inc.	Seaway Sand & Stone, Inc.	Swanton	sand — building, construction	Ls-13
		Tuffco Sand & Gravel, Inc.	Darby	sand — building	Mdn-11
Mahoning	Wallace Road Sand & Gravel			sand — asphaltic concrete	
				gravel — building, driveways, fill	
Marion	Fleming Construction Co., Inc.	Wallace Road Sand & Gravel	Springfield	sand — asphaltic concrete	Mg-630
		Pit #1		gravel — road construction/resurfacing	
		Pit #2	Prospect	sand — building	Mn-16
		Prospect Plant #12	Prospect	gravel — fill	
Medina	Penry Stone Co. Shelly Materials		Prospect	sand — building, portland cement concrete	Mn-19
			Prospect	sand — building	Mn-4
			Prospect	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	Mn-10
				gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	
Meigs	Martin Marietta Aggregates Meigs County Commissioners Shelly Materials	Baker Sand, Inc.	Harrisville, Westfield	sand — building, portland cement concrete, fill	Ma-20
		Friendsville Sand, L.P.	Westfield	gravel — road construction/resurfacing	Ma-23
		Seville Sand & Gravel, Inc.	Harrisville	sand — building, asphaltic concrete, filtration	Ma-22
				gravel — building, road construction/resurfacing, filtration	
Miami	Fenner Sand & Gravel, Inc. Martin Marietta Aggregates New Carlisle Sand & Gravel Co.	Apple Grove Plant	Letart	sand — road construction/resurfacing	Ms-205
		Meigs County Pit	Letart	gravel — road construction/resurfacing	Ms-301
		Racine Plant #6	Letart	sand — road construction/resurfacing	Ms-298
				sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	
Miami	Fenner Sand & Gravel, Inc. Martin Marietta Aggregates New Carlisle Sand & Gravel Co.	Woodville Concrete Corp.	Newton	gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	
		Troy Gravel #433	Concord	road construction/resurfacing, filtration, unspecified	Mi-4
				sand — unspecified	
				gravel — unspecified	
Miami	Fenner Sand & Gravel, Inc. Martin Marietta Aggregates New Carlisle Sand & Gravel Co.		Newton	sand — road construction/resurfacing	Mi-3
			Concord	sand — road construction/resurfacing	
			Bethel	gravel — road construction/resurfacing	Mi-501
				sand — fill	
Miami	Fenner Sand & Gravel, Inc. Martin Marietta Aggregates New Carlisle Sand & Gravel Co.			gravel — fill	

Monroe	Shelly Materials	West Milton Plant #22	Union	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified sand — building gravel — building gravel — farm	MI-504
	Tipp Stone Co., Inc.	Troy	Elizabeth		MI-12
	Wise Gravel	Wise Gravel	Newberry		MI-9
	Ohio-West Virginia Excavation	OH-WV Excavation	Salem	sand — building, road construction/resurfacing gravel — building, road construction/resurfacing	ME-508
Montgomery	Broadway Sand & Gravel, Inc.	Broadway Sand & Gravel, Inc.	Harrison	sand — building gravel — building	MY-65
	Carter & Carter, Inc.	Carter & Carter, Inc.	Miami	sand — building gravel — building, road construction/resurfacing	MY-CW
	Hilltop Basic Resources, Inc.	West Carrollton Aggregate Plant	Jefferson, Miami	sand — building, portland cement concrete, asphaltic concrete gravel — portland cement concrete, asphaltic concrete, fill	MY-19
	Martin Marietta Aggregates	Rip Rap Rd. #416	Wayne	sand — road construction/resurfacing gravel — road construction/resurfacing	MY-66
Morgan	Miller Bros. Gravel, Inc.	Miller Bros. Gravel, Inc.	Butler	sand — building, portland cement concrete, unspecified, masonry gravel — building, portland cement concrete, road construction/resurfacing, filtration, unspecified	MY-52
	Moraine Materials Co., Inc.	German town	German	sand — unspecified gravel — unspecified	MY-41
	John P. Raisch, Inc.	John P. Raisch, Inc.	Jefferson	gravel — unspecified	MY-R
	Taylorville Rd. Hardfill	Taylorville Rd. Hardfill	Wayne	gravel — pipeline	MY-55
Morrow	Tipp Stone Co., Inc.	Meeker	Butler	sand — building gravel — building	MY-61
	Chesterhill Stone Co.	Buck Farm	Windor	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	Mon-588
	Link Trucking Co.	Link Trucking Co.	Bloom	gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration sand — building, portland cement concrete, fill gravel — building, portland cement concrete, road construction/resurfacing, filtration	Mon-L
	Chesterville Sand & Gravel Co., Inc.	Chesterville Sand & Gravel Co., Inc.	Chester	sand — building, filtration gravel — building, road construction/resurfacing, filtration, landscaping, ice grits	Mw-10
Muskingum	Muskingum River Gravel Co.	S & S #4 S & S Ag #1	Muskingum Wayne	sand — unspecified sand — building, asphaltic concrete, road construction/resurfacing, unspecified	Mum-262 Mum-228
	Salt Creek Materials, Inc.	Salt Creek Materials, Inc.	Washington Cass	gravel — building, road construction/resurfacing, unspecified sand — unspecified sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	Mum-216 Mum-799 ^a
	Complete Resources Co.	Darby Materials Plant #5	Darby	sand — building, portland cement concrete, road construction/resurfacing	Fn-C
	Darby Creek Excavating	Darby Creek Excavating	Muhlenburg	gravel — building, road construction/resurfacing	Pky-DC ^c
Pickaway	William A. Hoffman, Jr.	Hoffman Pit	Wayne	gravel sand — fill	Pky-H
	Melvin Stone Co.	Richards Farms	Circleville, Wayne	gravel — fill gravel — unspecified sand — unspecified	Pky-R
	Valley Sand & Gravel, Inc.	Valley Sand & Gravel, Inc.	Darby	sand — filtration gravel — building	Pky-C
	Gene T. Wilson	Wilson Pit	Darby	sand — building gravel — building	Pky-W

^aInformation for Mum-799 includes information for Mum-863.
^cProduction only, no sales.

1997 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Pike	Davon Inc.	Piketon	Scioto	sand — unspecified	Pke-24
	South Central Sand & Gravel	Plant #1	Scioto	gravel — unspecified	Pke-30
	Valley Materials Co.	Valley Materials Co.	Scioto	sand — portland cement concrete gravel — road construction/resurfacing, filtration sand — building, portland cement concrete, road construction/resurfacing gravel — building, road construction/resurfacing, filtration	Pke-26
Portage	Beck Sand & Gravel, Inc.	Beck Sand & Gravel, Inc.	Shalersville	sand — unspecified	Pe-50
	Karl Brugmann Sand & Gravel, Inc.	Karl Brugmann Sand & Gravel, Inc.	Shalersville	gravel — unspecified sand — building	Pe-15
	Oscar Brugmann Sand & Gravel, Inc.	Oscar Brugmann Sand & Gravel, Inc.	Shalersville	gravel — building sand — unspecified	Pe-9
	R. A. Cruise Sand & Gravel, Inc.	R. A. Cruise Sand & Gravel, Inc.	Franklin, Ravenna	gravel — unspecified sand — portland cement concrete, asphaltic concrete, fill	Pe-45
	D & K Materials, Inc.	D & K Materials, Inc.	Brimfield	gravel — asphaltic concrete, septic sand — building, road construction/resurfacing	Pe-101
	Don's Dozer Service, Inc.	Don's Dozer Service, Inc.	Streetsboro	gravel — road construction/resurfacing	Pe-96
	Green Oaks Potting Products, Inc.	Green Oaks	Franklin	sand — building	Pe-89
	Hilltop Aggregate, Inc.	Hilltop Aggregate, Inc.	Suffield	sand — peat mix sand — unspecified	Pe-56
	Hugo Sand Co.	Hugo Sand Co.	Franklin	gravel — unspecified sand — building, road construction/resurfacing, unspecified	Pe-10
	Jefferson Materials Co.	Howitt	Streetsboro	gravel — building, road construction/resurfacing sand — portland cement concrete, asphaltic concrete, fill	Pe-63
	Lafarge Corp.	Shalersville	Shalersville	gravel — asphaltic concrete sand — building, industrial sand	Pe-68
	Lakeside Sand & Gravel Co.	Kotkowski Pit	Shalersville	gravel — building sand — portland cement concrete	Pe-40
	Lucky Sand & Gravel Co.	Campbell Pit	Shalersville	gravel — building sand — portland cement concrete	Pe-LS
		Lucky Sand & Gravel Co.	Mantua	gravel — building sand — building, portland cement concrete, asphaltic concrete, filtration, fill	Pe-L
	Miller Sand & Gravel, Inc.	Miller Sand & Gravel, Inc.	Windham	gravel — building, road construction/resurfacing, filtration, driveways, roofing sand — building, unspecified	Pe-39
	Rainbow Sand & Gravel, Inc.	Rainbow Sand & Gravel, Inc.	Shalersville	gravel — building, unspecified sand — portland cement concrete, asphaltic concrete	Pe-64
	Red Brush Peat Co.	Red Brush Peat Co.	Franklin	gravel — building, road construction/resurfacing, filtration, landscape, fill sand — soil mix	Pe-61
	Rockwell Sand & Gravel, Inc.	Rockwell Sand & Gravel, Inc.	Streetsboro	gravel — soil mix sand — building, portland cement concrete	Pe-85
	S & S Aggregate, Inc.	Twin Lakes - S & S Ag #11	Shalersville, Streetsboro	gravel — building sand — asphaltic concrete, road construction/resurfacing, unspecified	Pe-59
	Schloss Materials Co.	Twin Lakes - S & S Ag #10 Schloss Materials Co.	Streetsboro Mantua	gravel — asphaltic concrete, road construction/resurfacing, unspecified sand — unspecified	Pe-67 Pe-60
	Sober Sand & Gravel Co.	Sober Sand & Gravel Co.	Rootstown	sand — asphaltic concrete gravel — asphaltic concrete sand — industrial sand	Pe-18
	Solon Excavators Sand & Gravel, Inc.	Alger	Mantua	gravel — unspecified sand — building	Pe-36
	Sunshine Sand Co. Twinsburg Development Corp.	Sunshine Sand Co. Twinsburg Development Corp.	Streetsboro Aurora	gravel — building sand — unspecified sand — asphaltic concrete, fill, masonry gravel — building, road construction/resurfacing, bank run, landscape	Pe-SSC Pe-84

Preble	Loxley Aggregates, Inc. Wysong Gravel Co.	Loxley Aggregates, Inc. Camden Plant West Alexandria Plant	Twin Somers Twin	sand — general construction gravel — general construction sand — building, road construction/resurfacing gravel — road construction/resurfacing sand — building, road construction/resurfacing gravel — road construction/resurfacing	Pre-9 Pre-4 Pre-6
Richland	Bartley & Bolin Excavating D. H. Bowman & Sons, Inc. Ganges Gravel Co. John L. Garber Materials, Inc. S & S Aggregate, Inc.	Bartley & Bolin, Inc. D. H. Bowman & Sons, Inc. Ganges Gravel Co. John L. Garber Materials, Inc. S & S Ag #14	Weller Jefferson Cass Troy Washington	sand — building gravel — building sand — asphaltic concrete, backfill gravel — building, asphaltic concrete, road construction/ resurfacing, filtration, pipe bedding/backfill gravel — building sand — building gravel — building sand — asphaltic concrete, road construction/resurfacing, unspecified gravel — asphaltic concrete, road construction/resurfacing, unspecified	Rd-20 Rd-4 Rd-18 Rd-14 Rd-5
Ross	David E. Edgington Haubeil & Sons Asphalt & Materials, Inc. Muskingum River Gravel Co.	Edgington Pit Haubeil & Sons Asphalt & Materials, Inc. S & S #7	Concord Springfield Jefferson, Scioto	sand — building gravel — building sand — building, portland cement concrete, asphaltic concrete gravel — asphaltic concrete, road construction/resurfacing, filtration sand — asphaltic concrete, road construction/resurfacing, unspecified gravel — asphaltic concrete, road construction/resurfacing, unspecified sand — unspecified gravel — unspecified sand — building gravel — building sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified sand — building gravel — building	Rs-E Rs-H Rs-M
Scioto	ATS Enterprises Big T Mining E. E. Blair Construction Co. D.G.M., Inc. Scioto Valley Resources	A.T.S. Enterprises Big T Pit Blair Pit Tow Path Ready Mix Scioto Valley Resources	Green Porter Porter Morgan Valley	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing sand — fill sand — building, asphaltic concrete gravel — building sand — building gravel — building sand — unspecified gravel — unspecified	So-79 So-BT So-98 So-DGM So-100
Shelby	Miami River Stone Co. Spring Creek Corp.	Staley Pit Washington Twp. Pit Pence Deposit Jones Deposit	Clinton, Salem Washington Washington Washington	sand — unspecified gravel — unspecified sand — unspecified gravel — unspecified sand — portland cement concrete, asphaltic concrete gravel — portland cement concrete, asphaltic concrete sand — portland cement concrete, asphaltic concrete gravel — portland cement concrete, asphaltic concrete	Shy-SS Shy-13 Shy-11 Shy-18
Stark	American Sand & Gravel, Inc.	American Sand & Gravel, Plant 2 Crystal Springs	Jackson Jackson	sand — road construction/resurfacing gravel — road construction/resurfacing sand — road construction/resurfacing, gravel — road construction/resurfacing	Sk-203 Sk-243

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Arkansas	Beaver Excavating, Inc. Canton Aggregate	Stone Products Massillon Pit Massillon Pit Canton Aggregate Canton Aggregate	Canton Bethlehem Bethlehem Perry Plan	sand — road construction/resurfacing gravel — unspecified sand — unspecified gravel — unspecified sand — unspecified gravel — unspecified sand — unspecified gravel — unspecified sand — portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified sand — fill gravel — building, road construction/resurfacing sand — building gravel — building sand — asphaltic concrete, road construction/resurfacing gravel — asphaltic concrete, road construction/resurfacing sand — unspecified gravel — unspecified sand — portland cement concrete, asphaltic concrete gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing, roofing sand — building, portland cement concrete, asphaltic concrete, fill gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill sand — fill gravel — road construction/resurfacing sand — farm use gravel — farm use	Sk-BE Sk-607 Sk-MW Sk-CA Sk-681
	A. J. Diana Sons, Inc. Heiser Sand & Gravel Co. Massillon Materials, Inc. National Aggregates, Inc. Northern Ohio Paving Co. Oster Sand & Gravel, Inc.	Neidert Pit Heiser Sand & Gravel Massillon Materials, Inc. National Aggregates, Inc. Allied Plant #3 Massillon Plant	Lawrence Jackson Perry Sandy Perry Jackson, Perry	sand — unspecified gravel — unspecified sand — portland cement concrete, asphaltic concrete gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing, fill sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill sand — fill gravel — road construction/resurfacing sand — farm use gravel — farm use	Sk-694 Sk-HS Sk-M Sk-101 Sk-N Sk-165
	Ralph C. Wagner & Sons	Mudbrook Plant Wagner & Sons	Jackson Bethlehem	sand — base, backfill gravel — base, backfill sand — unspecified gravel — building sand — building, portland cement concrete, fill gravel — building, road construction/resurfacing, filtration sand — asphaltic concrete, road construction/resurfacing, unspecified gravel — asphaltic concrete, road construction/resurfacing, unspecified	Sk-R Sk-W
	A-1 All Ohio Sand & Gravel Co. Alden Sand & Gravel Co. Fletcher Sand & Gravel, Inc. Rubber City Sand & Gravel Co. S & S Aggregate, Inc.	A-1 All Ohio Sand & Gravel Co. Alden Sand & Gravel Co. Fletcher Sand & Gravel, Inc. Rubber City Sand & Gravel Co. Twin Lakes - S & S Ag #9	Coventry Northampton Norton Green Coventry	sand — base, backfill gravel — base, backfill sand — unspecified gravel — building sand — building, portland cement concrete, fill gravel — building, road construction/resurfacing, filtration sand — asphaltic concrete, road construction/resurfacing, unspecified gravel — asphaltic concrete, road construction/resurfacing, unspecified	St-50 St-55 St-52 St-9 St-44
	Nick's Trucking Samco, Inc.	Nick's Trucking Springbrook	Mesopotamia Mesopotamia	sand — unspecified sand — building, portland cement concrete, asphaltic concrete, fill gravel — building, asphaltic concrete	Tl-16 Tl-12
	Al Gasser Excavating, Inc. Goshen Sand & Gravel Newton Asphalt Paving, Inc. Oster Sand & Gravel, Inc.	Gasser Pit Goshen Sand & Gravel 516 Bolivar Pit	Goshen Goshen Dover Sandy	sand — unspecified gravel — unspecified sand — unspecified gravel — unspecified sand — asphaltic concrete gravel — asphaltic concrete sand — building, portland cement concrete, asphaltic concrete, fill gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill sand — building gravel — building, road construction/resurfacing, filtration sand — building gravel — building sand — building gravel — building, road construction/resurfacing gravel — building, road construction/resurfacing	Ts-204 Ts-1977 Ts-200 Ts-203
	Soehnlen Bros. Sand & Gravel, Inc. Stewart & Reichman, Inc. Stocker Sand & Gravel Co.	Soehnlen Bros. Sand & Gravel, Inc. Stewart & Reichman, Inc. Stocker Sand & Gravel Co.	Wayne Warwick Clay	sand — building, road construction/resurfacing, filtration gravel — building, road construction/resurfacing, filtration sand — building gravel — building sand — building, road construction/resurfacing gravel — building, road construction/resurfacing	Ts-182 Ts-111 Ts-69

Warren	Embro, Inc.	Stocker Sand & Gravel Co.	Clay	sand — building, road construction/resurfacing gravel — building, road construction/resurfacing	Ts-125
	L & I Natural Resources, Inc.	Embro, Inc.	Franklin	sand — building gravel — building	Wan-7
	Little Miami Sand & Gravel	L & I Pit & Mill	Union	sand — building gravel — building, road construction/resurfacing	Wan-50
		Little Miami Sand & Gravel Plant 2	Salem	sand — unspecified gravel — unspecified	Wan-46
		Little Miami Sand & Gravel Co. Plant 1	Salem	sand — unspecified gravel — unspecified	Wan-B
	Martin Marietta Aggregates	Franklin #714	Franklin	sand — road construction/resurfacing gravel — road construction/resurfacing	Wan-38
	Morrow Gravel Co.	Morrow Gravel Co.	Salem	sand — portland cement concrete, asphaltic concrete, fill gravel — portland cement concrete, asphaltic concrete	Wan-M2 ^a
	Carl E. Oeder & Sons Sand & Gravel	Oeder Pit	Union	sand — unspecified gravel — unspecified	Wan-41
	Atlas Towing Co. Beverly Slag Co.	Belpre Bank Run Devola Pit	Belpre Muskingum	sand — bank & pit run sand — unspecified gravel — unspecified	Wn-54 Wn-55
	Briggs Sand & Gravel, Inc. Grimes Excavating	Briggs Sand & Gravel, Inc. Grimes Excavating	Warren Grandview	sand — building gravel — road construction/resurfacing sand — building, portland cement concrete, road construction/resurfacing	Wn-508 Wn-1008
Wayne	M & J Sand & Gravel, Inc. Muskingum River Gravel Co.	M & J Sand & Gravel, Inc. Plant #2	Newport Grandview	gravel — building, road construction/resurfacing sand — unspecified sand — asphaltic concrete, unspecified gravel — asphaltic concrete, road construction/resurfacing, unspecified	Wn-1010 Wn-38
	Trout Sand & Gravel Co.	Trout Sand & Gravel Co.	Warren	sand — unspecified gravel — unspecified	Wn-510
	Mark Williams Blacktop Co., Inc.	Williams Pit #2 Williams Pit #1	Warren Warren	sand — building, asphaltic concrete, road construction/resurfacing gravel — asphaltic concrete sand — asphaltic concrete gravel — asphaltic concrete	Wn-1007 Wn-1009
	Buckeye Excavating Development, Inc. E. A. Construction, Inc.	Steiner Pit #1	Canaan Clinton	gravel — building sand — building gravel — building	We-23 We-24
	Prairie Lane Sand & Gravel Co.	Prairie Lane Sand & Gravel Co.	Franklin	sand — building, road construction/resurfacing gravel — building, road construction/resurfacing	We-11
	Rupp Construction, Inc.	Rupp Construction, Inc.	Baughman	sand — building, portland cement concrete, asphaltic concrete gravel — building, portland cement concrete, asphaltic concrete	We-7
	Zollinger Sand & Gravel Co.	Zollinger Sand & Gravel Co.	Chippewa	sand — building, portland cement concrete, fill gravel — driveway	We-15
	Heer Excavating, Inc.	Mason Pit	Superior	sand — building gravel — building	Ws-22
	Andy Nixon Contractors, Inc. Stoneco, Inc.	Nixon Pit Takacs Quarry	Madison Superior	gravel — bank run sand — portland cement concrete, asphaltic concrete, road construction/resurfacing gravel — portland cement construction/resurfacing	Ws-N Ws-T
	Thiel Construction Co. Weber Sand & Gravel, Inc.	Thiel Construction Co. Weber Sand & Gravel, Inc.	Superior St. Joseph	gravel — unspecified sand — building, portland cement concrete gravel — building, fill sand — building, filtration	Ws-21 Ws-11
Wyandot	Kirby's Sand & Gravel, Inc.	Kirby's Sand & Gravel, Inc.	Eden	gravel — building, filtration sand — building, portland cement concrete	Wt-17
	National Lime & Stone Co. Precision Aggregate, Inc.	Upper Sandusky Plant Precision Aggregate I	Eden Crane, Eden	sand — building, portland cement concrete gravel — portland cement concrete sand — portland cement concrete gravel — portland cement concrete	Wt-15 ^b Wt-4

^aInformation for Wan-M2 includes information for Wan-M.^bInformation for Wt-15 includes information for Wt-18.

**1997 SANDSTONE/CONGLOMERATE COMPANIES
WITH SALES OR PRODUCTION**

Company	No. of operations	Sales (tons)	Production (tons)
Beaver Excavating, Inc.	1	581,230	581,230
Belden Brick Co.	1	1,967	1,967
Best Sand Corp.	2	907,157	1,225,463
Briar Hill Stone Co.	5	26,787	26,787
Oscar Brugmann Sand & Gravel, Inc.	1	52,615	65,000
Cleveland Quarries	2	4,170	4,170
Boone Coleman Construction, Inc.	1	600	600
E. A. Construction, Inc.	1	24,462	24,462
Johnson Stone Products, Inc.	1	207,867	247,320
Keeney Sand & Stone, Inc.	1	72,807	72,807
Kimble Clay & Limestone Co.	1	20,424	20,424
Mesenburg Bros., Inc.	1	6,426	6,426
Newbury Sand & Gravel	1	18,115	18,115
Oglebay Norton Industrial Sands, Inc.	2	366,125	366,125
Riverside Sand & Gravel Co., Inc.	1	2,438	2,438
Samco, Inc.	1	5,869	5,869
R. W. Sidley, Inc.	2	160,850	170,450
Solomon's Mines, Inc.	1	17,877	17,877
U.S. Silica Co.	1	12,539	16,115
Waller Bros. Stone Co.	2	16,031	16,031
Frank Widmor Coal Co., Inc.	1	24,709	24,709
TOTAL: 21 companies	30	2,531,065	2,914,385

1997 OHIO DIRECTORY OF SANDSTONE/CONGLOMERATE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Geo-N).

County	Name of operator	Name of quarry	Township	Geological unit	Type and principal use	State mine number
Belmont	Frank Widmor Coal Co.,	Bellaire Stone	Pultney		crushed or broken stone — riprap	Bt-1190
Columbiana	Solomon's Mines, Inc.	Solomon's Mines, Inc. #2	Salem		crushed or broken stone — road base	Ca-S
Coshocton	Briar Hill Stone Co.	Quarry #26 Quarry #32 Quarry #24 Quarry #55 Quarry #3	Monroe Monroe Monroe Monroe Tiverton	Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian)	dimension stone — rough construction dimension stone — rough construction dimension stone — rough construction dimension stone — rough construction dimension stone — rough construction	Cn-13 Cn-686 Cn-692 Cn-815 Cn-659
Erie	Cleveland Quarries	Birmingham Quarry	Florence	Berea (Mississippian)	crushed or broken stone — aggregate; dimension stone — rough construction, rubble, finished stone	Ee-21
Gallia	Beaver Excavating Co.	Gavin Plant Landfill	Cheshire		crushed or broken stone — fill	Ga-VFL
Geauga	Best Sand Corp.	Best Sand Corp.	Munson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — foundry sand, glass sand, metallurgical pebble, refractory, polishing/ grinding sand, engine sand, frac sand, construction, filtration, turf & landscape, filler & extender	Gea-3
Huron	Newbury Sand & Gravel R. W. Sidley, Inc.	Newbury Sand & Gravel Hamden Quarry Thompson Pit	Newbury Hamden Thompson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — construction crushed or broken stone — construction crushed or broken stone — aggregate, construction, filter/golf/sand blast/mortar mix	Gea-N Gea-S Gea-1
Knox	Mesenburg Bros., Inc.	Mesenburg Bros., Inc.	Townsend	Berea (Mississippian)	crushed or broken stone — riprap	Hrn-8
Lake	Oglebay Norton Industrial Sands, Inc.	Millwood	Union	Black Hand (Mississippian)	crushed or broken stone — glass sand, silica flour, engine sand, construction, industrial sand	Kx-1
Lorain	Keeney Sand & Stone, Inc.	Keeney Sand & Stone, Inc.	Leroy		crushed or broken stone — aggregate, construction	Lke-K
	Cleveland Quarries	Anherst Quarries	Anherst	Berea (Mississippian)	crushed or broken stone — aggregate; dimension stone — rough construction, rubble, finished stone	Ln-3
Perry	Johnson Stone Products, Inc.	Kipton Quarry	Camden		crushed or broken stone — riprap, aggregate	Ln-J
	Oglebay Norton Industrial Sands, Inc.	Glass Rock	Hopewell	Massillon (Pennsylvanian)	crushed or broken stone — glass sand, refractory, silica flour, frac sand, construction	Py-344
Pike	Best Sand Corp.	Schrader Quarry	Jackson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — foundry sand, glass sand, metallurgical pebble, polishing/grinding sand, construction, filtration	Pke-31
Portage	Oscar Brugmann Sand & Gravel, Inc.	Oscar Brugmann Sand & Gravel, Inc.	Shalersville		crushed or broken stone — unspecified	Pe-9
Scioto	Boone Coleman Construction, Inc. Waller Bros. Stone Co.	Boone Coleman Construction, Inc. Crabtree Quarry	Washington Morgan, Rush, Union Rush	Buena Vista (Mississippian)	crushed or broken stone — construction dimension stone — rough construction	So-BC So-76
Summit	Riverside Sand & Gravel Co., Inc.	Inskeep Quarry	Stow, Tallmadge	Buena Vista (Mississippian)	dimension stone — rough construction	So-48
Trumbull	Samco, Inc.	Riverside Sand & Gravel Springbrook	Mesopotamia		crushed or broken stone — riprap	St-24
Tuscarawas	Belden Brick Co. Kimble Clay & Limestone Co. U.S. Silica Co.	Belden Kimble Clay & Limestone Co. Dundee Plant	Sugar Creek Dover Wayne		crushed or broken stone — construction; dimension stone — rough architectural	Tl-12
Wayne	E. A. Construction, Inc.	#1	Clinton	Massillon (Pennsylvanian)	crushed or broken stone — construction crushed or broken stone — construction crushed or broken stone — foundry sand crushed or broken stone — construction	Ts-1646 Ts-1818 Ts-1660 We-EA

**1997 CLAY COMPANIES WITH
SALES OR PRODUCTION**

Company	No. of operations	Sales (tons)	Production (tons)
American Landfill, Inc.	1	3,600	3,600
Athens Hocking Reclamation Center	1	1,773	1,773
Belden Brick Co.	4	265,158	265,158
Belville Mining Co., Inc.	1	6,534	6,534
Blue Jay Enterprises of Ts. Co., Inc.	2	31,364	31,364
Bowerston Shale Co.	1	9,501	9,501
Browning-Ferris Industries of Ohio, Inc.	1	109,082	109,082
Buckeye-Industrial Mining Co.	2	5,395	5,395
Cedar Heights Clay Co.	2	55,778	55,778
Clark Clay Co.	1	4,962	4,962
Cochran Transportation Services, Inc.	1	108	108
D. & D. Mining Co.	1	24,906	24,906
Dennis Clay Co.	2	39,774	39,774
James E. Downard	1	91	91
E. A. Construction, Inc.	1	1,764	1,764
ENZ, Inc.	1	1,062	1,062
R. A. Eberts Co., Inc.	1	4,967	4,967
General Clay Products Corp.	1	20,521	20,521
Green Oaks Potting Products, Inc.	1	35	35
Holmes Limestone Co.	2	31,546	31,546
Kimble Clay & Limestone Co.	1	61,432	61,432
Koch Engineering Co., Inc.	1	886	886
L & M Mineral Co.	2	10,675	10,675
Lafarge Corp.	1	107,531	107,531
Loxley Aggregates, Inc.	1	2,089	2,089
Mt. Eaton Reclamation	1	48,000	48,000
Oldtown Coal Co.	1	97,379	97,379
Rumpke Mountain Mining Co.	1	101,616	181,701
Sandkuhl Clay Works, Inc.	1	7,366	7,366
Seaway Sand & Stone, Inc.	1	17,951	17,951
Simak Trucking, Inc.	1	7,033	7,033
Solomon's Mines, Inc.	2	508	508
Soltis Sand & Gravel	1	662	662
Southdown Inc.	1	122,127	95,350
State Line Resources, Inc.	1	46,530	46,530
Stone Creek Brick Co.	1	40,229	40,229
Twinsburg Development Corp	1	12,376	12,376
VFL Technology Corp.	1	75,580	75,580
Valley Clay Mining Co.	2	9,588	4,540
Waste Management of Ohio, Inc.	1	30,000	30,000
Waterloo Coal Co., Inc.	1	35,422	35,422
Zoar Mining Co.	1	2,516	2,516
Zollinger Sand & Gravel Co.	1	30,000	30,000
TOTAL: 43 companies	54	1,485,417	1,533,677

1997 OHIO DIRECTORY OF CLAY-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Cn-B).

County	Name of operator	Name of mine or quarry	Township	Geological unit	Principal use	State mine number
Ashtabula	Simak Trucking, Inc.	Simak Trucking, Inc.	Kingsville		construction	Asa-18
Athens	Athens Hocking Reclamation Center Cochran Transportation Services, Inc. R. A. Eberts Co., Inc.	Athens Hocking Reclamation Center Cochran Transportation Services, Inc. Diamond Stone	York Dover Lee		oil & gas well plugging landfill unspecified	As-594 As-595 As-533
Auglaize	Sandkuhl Clay Works, Inc.	Sandkuhl Clay Works, Inc.	Salem	Pleistocene glacial clay	unspecified	Ae-7
Columbiana	Buckeye-Industrial Mining D. & D. Mining Co. Solomon's Mines, Inc. State Line Resources, Inc.	West Point D. & D. Strip Solomon's Mines, Inc. #2 State Line Resources, Inc.	Madison Unity Salem Middleton	No. 5 & No. 6 clays (Pennsylvanian)	vitriified products refractories landfill common clay products	Ca-BIM Ca-348 Ca-S Ca-505
Fairfield	James E. Downard	Downard Pit	Rush Creek		fil	Fd-16
Gallia	VFL Technology Corp.	Ohio Power land	Cheshire		landfill	Ga-VFL
Geauga	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman		fil	Gea-9
Greene	Southdown Inc.	Miller & Trollingier	Bath		cement manufacture	Ge-8
Hamilton	Rumpke Mountain Mining Co.	Rumpke Mountain Mining Co.	Colerain		landfill	Hmn-72
Hocking	General Clay Products Corp.	General Clay-Diamond Pit	Starr		common clay products	Hg-330
Holmes	Clark Clay Co. Holmes Limestone Co.	Clark Clay Co. 241 Plant	Hardy Hardy	Putnam Hill (Pennsylvanian) Brookville (Pennsylvanian)	unspecified common clay products	Hs-56 Hs-67
Jackson	Cedar Heights Clay Co. Waterloo Coal Co., Inc.	Sadler Harrison Bowman Strip-Zoar Quarry	Jefferson Madison Bloomfield, Madison	No. 5 clay (Pennsylvanian) No. 5 & No. 6 clays (Pennsylvanian)	common clay products common clay products unspecified	Jkn-CH1 Jkn-CH2 Jkn-367
Lawrence	Belville Mining Co., Inc.	Brady Creek	Washington	No. 4A & No. 5 clays (Pennsylvanian)	unspecified	Le-B
Lucas	Seaway Sand & Stone, Inc.	Seaway Sand & Stone, Inc.	Swanton		common clay products	Ls-13
Muskingum	Bowerston Shale Co. Valley Clay Mining Co.	Frazeysburg Spring #4	Jackson Newton	Flint Ridge & Middle Mercer (Pennsylvanian) Tionesta clay (Pennsylvanian)	vitriified products stoneware	Mum-776 Mum-904
Ottawa	Browning-Ferris Industries of Ohio, Inc.	Ottawa County Landfill	Erie		landfill	Oa-BF
Paulding	Lafarge Corp.	Paulding Quarry	Crane	Silica Formation (Devonian)	cement manufacture	Pg-1
Perry	Dennis Clay Co. Valley Clay Mining Co.	Nelson/Butler Co. Rd. 7 Tague Mine	Clayton Monday Creek Harrison	No. 5 clay (Pennsylvanian)	common clay products common clay products stoneware	Py-D1 Py-338 Py-V
Portage	Green Oaks Potting Products, Inc. Twinsburg Development Corp.	Green Oaks Twinsburg Development Corp.	Franklin Aurora		construction construction, landfill	Pe-89 Pe-84
Preble	Loxley Aggregates, Inc.	Loxley Aggregates, Inc.	Twin		construction	Pre-9
Stark	American Landfill, Inc. Buckeye-Industrial Mining ENZ, Inc. Holmes Limestone Co. Koch Engineering Co., Inc. Oldtown Coal Co. Waste Management of Ohio, Inc.	American Landfill, Inc. Close Sickafosse-Fox Pit Bolivar Mine Koch Engineering Co., Inc. CW/MWCD Clay Project Countywide RDF	Sandy Pike Pike, Sandy Bethlehem Pike Pike Bethlehem, Pike	No. 6 & No. 6A clays (Pennsylvanian) No. 5 clay (Pennsylvanian) Brookville (Pennsylvanian) No. 5 clay (Pennsylvanian) No. 5 clay (Pennsylvanian) No. 5 clay (Pennsylvanian)	landfill vitriified products landfill common clay products vitriified products landfill landfill	Sk-246 Sk-B Sk-208 Sk-235 Sk-K Sk-O Sk-217

1997 OHIO DIRECTORY OF CLAY-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Cn-B).

County	Name of operator	Name of mine or quarry	Township	Geological unit	Principal use	State mine number
Tuscarawas	Belden Brick Co.	Wallick Pit Moomaw Pit Belden Pit Shanesville Pit Swonger Pit	Franklin, Wayne Sugar Creek Sugar Creek Sugar Creek Sandy	Brookville & Lower Kittanning (Pennsylvanian) Brookville & Tionesta (Pennsylvanian) No. 5, Brookville, Tionesta (Pennsylvanian) Brookville (Pennsylvanian) Brookville & Tionesta (Pennsylvanian)	common clay products common clay products common clay products common clay products common clay products, refractories, construction, ceramic tile	Ts-1841 Ts-1517 Ts-1646 Ts-1939 Ts-520
	Blue Jay Enterprises of Ts. Co., Inc.	Blue Jay Pit Kimble Clay & Limestone Co. Luikert Spring Stone Creek Clay Mine Zoar Mining Co.	Sandy Dover Mill, Warwick Jefferson Sandy	Brookville & Tionesta (Pennsylvanian) Vanport (Pennsylvanian)	common clay products refractories, landfill common clay products common clay products vitrified products common clay products	Ts-BJ Ts-1818 Ts-1914 Ts-1982 Ts-1557 Ts-540
	Kimble Clay & Limestone Co. L & M Mineral Co.					
	Stone Creek Brick Co. Zoar Mining Co.					
Wayne	E. A. Construction, Inc. Mt. Eaton Reclamation, Inc. Zollinger Sand & Gravel Co.	#1 Mt. Eaton Reclamation, Inc. Zollinger Sand & Gravel Co.	Clinton Paint Chippewa	No. 6 clay (Pennsylvanian) Pleistocene	construction common clay products construction	We-EA We-26 We-15

**1997 SHALE COMPANIES WITH
SALES OR PRODUCTION**

Company	No. of operations	Sales (tons)	Production (tons)
American Landfill, Inc.	1	12,362	12,362
Belden Brick Co.	4	122,387	194,093
Blue Jay Enterprises of Ts. Co., Inc.	2	11,600	11,600
Bowerston Shale Co.	2	53,188	53,188
Buckeye-Industrial Mining Co.	2	1,249	1,249
Craigton Shale Co.	1	8,863	8,863
Dennis Clay Co.	3	47,355	47,355
Dome Minerals, Inc.	1	18,458	18,458
ENZ, Inc.	1	176	176
ESSROC Cement Corp.	1	105,988	105,988
General Clay Products Corp.	3	32,366	32,366
Glen-Gery Corp.	1	207,096	207,096
Holmes Limestone Co.	2	89,243	89,243
Hydraulic Press Brick Co.	1	240,080	240,080
Kimble Clay & Limestone Co.	1	183	183
Knox County Board of Commissioners	1	873	873
L & M Mineral Co.	1	45,918	45,918
London Tile Co.	1	530	530
Prairie Lane Sand & Gravel Co.	1	23,011	23,011
Rumpke Mountain Mining Co.	1	1,509,403	2,292,212
Seaway Sand & Stone, Inc.	1	3,724	3,724
Stone Creek Brick Co.	1	6,060	6,060
Summitville Tiles, Inc.	1	36,041	36,041
Towne Square Products	1	165	165
Waste Management of Ohio, Inc.	1	281,284	281,284
TOTAL: 25 companies	36	2,857,603	3,712,118

1997 OHIO DIRECTORY OF SHALE-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which the Division of Mines has not assigned a state mine number, a letter designation is used (example: Kx-K).

County	Name of operator	Name of mine	Township	Geological unit	Principal use	State mine number
Ashland	London Tile Co.	Biglow	Ruggles	Bedford (Mississippian)	common clay products	Ald-1
Columbiana	Buckeye-Industrial Mining Dome Minerals, Inc. Summitville Tiles, Inc.	West Point Dome Minerals, Inc. Summitville Tiles, Inc.	Madison Franklin Franklin		construction brick pavers common clay products	Ca-BIM Ca-947 Ca-205
Coshocton	General Clay Products Corp.	Drescher Pit	Crawford	Lower Kittanning (Pennsylvanian)	common clay products	Cn-787
Cuyahoga	Hydraulic Press Brick Co.	Hydraulic Press Brick Co.	City of Independence	Chagrin (Devonian)	lightweight aggregate	Cya-19
Hamilton	Rumpke Mountain Mining Co.	Rumpke Mountain Mining	Colerain		landfill	Hmn-72
Harrison	Bowerston Shale Co.	Bowerston	Monroe	Conemaugh (Pennsylvanian)	vitrified products	Hn-152
Hocking	General Clay Products Corp.	General Clay-Diamond Pit	Starr		common clay products	Hg-330
Holmes	Holmes Limestone Co.	241 Plant	Hardy	Pennsylvanian	common clay products	Hs-67
Knox	Board of Knox County Commissioners	Apple Valley	Brown		construction	Kx-K
Licking	Bowerston Shale Co.	Hanover	Hanover	Logan (Mississippian)	vitrified products	Lg-501
Lucas	Seaway Sand & Stone, Inc.	Seaway Sand & Stone, Inc.	Swanton		common clay products	Ls-13
Mahoning	ESSROC Cement Corp.	Carbon Pit	Poland, Springfield		cement manufacture	Mg-EM
Marion	Glen-Gery Corp.	Iberia Quarry	Tully	Bedford (Mississippian)	common clay products	Mn-7
Medina	General Clay Products Corp.	General Clay Products Pit #5	Wadsworth		common clay products	Ma-6
Muskingum	Dennis Clay Co.	Baker	Newton		common clay products	Mum-DCC
Noble	Towne Square Products	Towne Square Products	Buffalo		ceramic tile	Ne-66
Perry	Dennis Clay Co.	Nelson/Butler Co. Rd. 7	Clayton Monday Creek		common clay products common clay products	Py-D1 Py-338
Stark	American Landfill, Inc.	American Landfill, Inc.	Sandy	Middle Kittanning & Lower Freeport (Pennsylvanian)	landfill	Sk-246
	Buckeye-Industrial Mining ENZ, Inc. Waste Management of Ohio, Inc.	Robertsville Sickafosse-Fox Pit Countywide RDF	Paris Pike, Sandy Bethlehem, Pike	Lower Kittanning (Pennsylvanian)	vitrified products construction landfill	Sk-BI Sk-208 Sk-217
Tuscarawas	Belden Brick Co.	Wallick Pit	Franklin, Wayne		common clay products	Ts-1841
		Moomaw Pit Belden Pit	Sugar Creek Sugar Creek	Brookville & Lower Kittanning (Pennsylvanian) Brookville (Pennsylvanian) Brookville & Lower Kittanning (Pennsylvanian)	common clay products common clay products common clay products	Ts-1517 Ts-1646
	Blue Jay Enterprises of Ts. Co., Inc.	Shanesville Pit Swonger Pit Blue Jay Pit	Sugar Creek Sandy Sandy	Brookville (Pennsylvanian) Brookville (Pennsylvanian) Brookville (Pennsylvanian)	common clay products common clay products common clay products	Ts-1939 Ts-520 Ts-BJ
	Holmes Limestone Co.	L & M Rainsberg	Rush	Pennsylvanian	common clay products	Ts-HI
	Kimble Clay & Limestone Co.	Kimble Clay & Limestone Co.	Dover	Vanport (Pennsylvanian)	construction	Ts-1818
	L & M Mineral Co.	Evans et al.	Rush		common clay products	Ts-1884
	Stone Creek Brick Co.	Stone Creek Shale Pit	Jefferson		vitrified products	Ts-1558
Wayne	Craigton Shale Co. Prairie Lane Sand & Gravel Co.	Craigton Shale Co. Prairie Lane Sand & Gravel Co.	Clinton Franklin		construction construction	We-25 We-11

**1997 OHIO DIRECTORY OF SALT-MINE AND SALT-BRINING-PLANT OPERATORS
REPORTING SALES OR PRODUCTION, BY COUNTY**

County	Name of operator	Name of mine	Township	Geological unit and product	State mine number
Cuyahoga	Cargill Incorporated	Cleveland Mine	City of Cleveland	Salina (Silurian)—rock salt	Cya-30
Lake	Morton International, Inc.	Fairport Mine	Painesville	Salina (Silurian)—rock salt	Lke-6
Licking	R. H. Penick Co.	R. H. Penick Co.	Newark	"Newburg" (Silurian)—natural brine	Lg-45
Summit	Cargill Incorporated	Cargill Incorporated	Coventry	Salina (Silurian)—artificial brine	St-9127
Wayne	Morton International, Inc.	Morton Salt Well Field	Milton	Salina (Silurian)—artificial brine	We-9129

1997 OHIO DIRECTORY OF GYPSUM-MINE OPERATORS REPORTING SALES OR PRODUCTION

County	Name of operator	Name of mine	Township	Geological unit	State mine number
Ottawa	Celotex Corp.	American #2	Portage	Silurian	Oa-2

1997 OHIO DIRECTORY OF PEAT-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine	Township	Type and principal use	State mine number
Champaign	Sphagnum Moss Peat Farm	Sphagnum Moss Peat Farm	Harrison	mulch	Cpn-9
Portage	Green Oaks Potting Products, Inc. Red Brush Peat Co.	Green Oaks Red Brush Peat Co.	Franklin Franklin	unspecified mulch	Pe-89 Pe-61
Williams	Lingvai Peat Co.	Lingvai Peat Co.	Center	mulch	Ws-17

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1997 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY**

COAL ● ○

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
3	Belmont	Bt-68	D-0360	Ohio Valley Coal Co.
146	Harrison	Hn-217	D-0440	Varkony Mining Co.
150	Harrison	Hn-700	D-51, D-54, D-334, D-414, D-452, D-784, D-826	Consolidation Coal Co.
161	Holmes	Hs-67	IM-3, IM-768	Holmes Limestone Co.
165	Jackson	Jkn-367	D-0594, D-968, D-1083	Waterloo Coal Co., Inc.
186	Jefferson	Jfn-784	D-0728	F. & M. Coal Co.
212	Meigs, Vinton	Ms-293	D-0354, D-0463	Southern Ohio Coal Co.
213	Meigs	Ms-294	D-0355	Southern Ohio Coal Co.
215	Monroe	Me-4	D-0433	Quarto Mining Co.
228	Morgan, Noble	Ne-41	D-1034, D-1084	Central Ohio Coal Co.
246	Stark	Sk-208	D-1015	ENZ, Inc.
248	Stark	Sk-217	D-0938	Waste Management of Ohio, Inc.
258	Tuscarawas	Ts-540	IM-28	Zoar Mining Co.
262	Tuscarawas	Ts-1727	IM-9	Kimble Clay & Limestone Co.
264	Tuscarawas	Ts-1884	IM-6	L & M Mineral Co.
267	Tuscarawas	Ts-1914	D-0701	L & M Mineral Co.
300	Vinton	Ms-293	D-0354, D-0463	Southern Ohio Coal Co.
363	Stark	Sk-235	D-0865	Holmes Limestone Co.
418	Vinton	Vn-182	D-0631	R. A. Eberts Co., Inc.
420	Vinton	Vn-184	D-0609	Waterloo Coal Co., Inc.
424	Belmont	Bt-1150	D-0478, D-0597	Marietta Coal Co.
433	Tuscarawas	Ts-1991	D-0702	Daron Coal Co., Inc.
441	Columbiana	Ca-348	D-1002	D. & D. Mining Co.
450	Belmont	Bt-1162	D-0720	Marietta Coal Co.
456	Belmont	Bt-1168	D-0619	R & F Coal Co.
491	Lawrence	Le-B	IM-1188, D-0746	Belville Mining Co., Inc.
493	Washington	Ne-1008	D-0706	B & N Coal, Inc.
497	Perry	Py-340	D-0916	Buckingham Coal Co., Inc.
510	Tuscarawas	Ts-2007	D-0737	Red Malcuit, Inc.
513	Vinton	Vn-S	D-0793	Sands Hill Coal Co., Inc.
514	Noble	Ne-151	D-0807	B & N Coal, Inc.
529	Columbiana	Ca-349	D-0928	Buckeye Industrial Mining Co.
555	Tuscarawas	Ts-2005	D-0769	Valley Mining, Inc.
580	Harrison	Hn-710	D-0426	Harrison Mining Corp.
598	Tuscarawas	Ts-2019	D-0852	Kimble Clay & Limestone Co.
601	Tuscarawas	Ts-2023	D-0796	Holmes Limestone Co.
602	Vinton	Vn-191	D-0867, D-0957, D-1004	Waterloo Coal Co., Inc.
603	Belmont	Bt-1190	IM-1089, D-1061	Frank Widmor Coal Co., Inc.
604	Belmont	Bt-AT	D-0922	Marietta Coal Co.
627	Noble	Ne-155	D-0958	B & N Coal, Inc.
629	Perry	Py-B	D-0940	Buckingham Coal Co., Inc.
631	Stark	Sk-246	D-1090	American Landfill, Inc.
632	Stark	Sk-247	D-0929	Buckeye Industrial Mining Co.
634	Tuscarawas	Ts-1939	IM-47	Belden Brick Co.
640	Tuscarawas	Ts-RM	D-0904	Kimble Clay & Limestone Co.
646	Columbiana	Ca-986	D-1111	C & E Coal, Inc.
647	Columbiana	Ca-987	D-0928	Buckeye Industrial Mining Co.
648	Guernsey	Gy-315	D-0951	Northshore Coal, Inc.
652	Jackson	Jkn-1070	D-0997, D-1115	R. A. Eberts Co., Inc.
653	Jackson	Jkn-1071	D-1003	Sands Hill Coal Co., Inc.
657	Jefferson	Jfn-823	D-0949	Sterling Mining Co.
663	Perry	Py-A	D-0931	Avis Coal Co.
667	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
670	Tuscarawas	Ts-2045	D-1001	Holmes Limestone Co.
671	Tuscarawas	Ts-DC	D-0954-1	Daron Coal Co., Inc.
674	Tuscarawas	Ts-HLC	D-0969	Holmes Limestone Co.
675	Vinton	Vn-194	D-0973	Sands Hill Coal Co., Inc.
683	Belmont	Bt-B	D-0998	Northshore Coal, Inc.
686	Carroll	Cl-HM1	D-1035	Myers Mining
688	Columbiana	Ca-CM1	D-0950	Commercial Minerals, Inc.
695	Coshocton	Cn-841	D-1033	R & R Minerals, Inc.
696	Guernsey	Gy-318	D-1025	Valley Mining, Inc.
709	Jefferson	Jfn-831	D-1026	Valley Mining, Inc.
716	Muskingum	Mum-O	D-1030	Oxford Mining
718	Stark	Sk-BI	D-1043	Buckeye Industrial Mining Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1997 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

COAL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
720	Tuscarawas	Ts-1841	IM-45	Belden Brick Co.
725	Tuscarawas	Ts-2039	D-1023-1	Miller Mining, Inc.
730	Belmont	Bt-M2	D-1029	Marietta Coal Co.
731	Belmont	Bt-RF2	D-1062	R & F Coal Co.
732	Belmont	Bt-VM	D-1059	Valley Mining, Inc.
734	Carroll	Cl-514	D-1081	Miller Mining, Inc.
736	Columbiana	Ca-997	D-1051	Commercial Minerals, Inc.
737	Columbiana	Ca-998	D-1068	Commercial Minerals, Inc.
740	Coshocton	Cn-H1	D-1094	Holmes Limestone Co.
741	Coshocton	Cn-OX1	D-1064, D-1113	R & F Coal Co.
742	Coshocton	Cn-RF3	D-1071	R & F Coal Co.
745	Guernsey	Gy-327	D-1088	Holmes Limestone Co.
748	Harrison	Hn-759	D-1037	Melvin Schaney
749	Harrison	Hn-761	D-1082, D-1097	Sunnydale Mining Co.
753	Holmes	Hs-HLC1	D-1092	Holmes Limestone Co.
756	Jefferson	Jfn-835	D-1063	Anthony Mining Co., Inc.
757	Jefferson	Jfn-JC	D-1067	Cravat Coal Co.
758	Jefferson	Jfn-ST	D-1019	Sterling Mining Co.
759	Lawrence	Le-BM	D-1057, D-1073	Belville Mining Co., Inc.
760	Noble	Ne-BN	D-1038	B & N Coal, Inc.
761	Noble	Ne-BN1	D-1032	B & N Coal, Inc.
762	Perry	Py-BM1	D-1089	Buckingham Coal Co., Inc.
763	Perry	Py-BM2	D-1093	Buckingham Coal Co., Inc.
764	Perry	Py-O	D-1086	Oxford Mining
766	Tuscarawas	Ts-DCC	D-1075	Daron Coal Co., Inc.
768	Tuscarawas	Ts-MM3	D-1085	Miller Mining, Inc.
769	Carroll	Cl-BIM	D-1107	Buckeye Industrial Mining Co.
772	Coshocton	Cn-OM	D-1104	Oxford Mining Co., Inc.
773	Guernsey	Gy-317	D-1011	R & F Coal Co.
776	Harrison	Hn-C	D-1098	Cravat Coal Co.
777	Holmes	Hs-HL	D-1109	Holmes Limestone Co.
778	Jackson	Jkn-SHCC	D-1108	Sands Hill Coal Co., Inc.
779	Stark	Sk-HCC	D-1106	Holmes Limestone Co.
780	Coshocton	Cn-TS	D-1110	Miller Mining, Inc.
783	Tuscarawas	Ts-520	IM-214	Blue Jay Enterprises of Ts. Co., Inc.
784	Tuscarawas	Ts-K4	D-1079	Kimble Clay & Limestone Co.
787	Gallia	Ga-629	D-1095	Sands Hill Coal Co., Inc.
788	Belmont	Bt-1172	D-0753	Marietta Coal Co.
789	Columbiana	Ca-CE	D-1127	C & E Coal, Inc.
790	Columbiana	Ca-1003	D-0928	Buckeye Industrial Mining Co.
791	Coshocton	Cn-RF4	D-1119	R & F Coal Co.
792	Guernsey	Gy-N	D-1118	Northshore Coal, Inc.
793	Guernsey	Gy-307	D-0608	R & F Coal Co.
795	Harrison	Hn-767	D-1124	Schiappa Coal Co., Inc.
796	Harrison, Jefferson	Jfn-K	IM-1164	K.C.C.I.
797	Jackson	Jkn-CH2	IM-1302	Cedar Heights Clay Co.
798	Muskingum	Mum-RF	D-1131	R & F Coal Co.
799	Noble	Ne-BN2	D-1122	B & N Coal, Inc.
801	Perry	Py-BC1	D-1126	Buckingham Coal Co., Inc.
802	Stark	Sk-B	D-1123	Buckeye Industrial Mining Co.
803	Tuscarawas	Ts-AL	D-1121	Miller Mining, Inc.
805	Tuscarawas	Ts-MM5	D-1130	Miller Mining, Inc.
806	Tuscarawas	Ts-VM	D-1125	Valley Mining, Inc.
807	Tuscarawas	Ts-2041	D-1116	L & M Mineral Co.
808	Belmont	Bt-BG	D-1102	Black Gold Recovery, Inc.
809	Belmont	Bt-CC1	D-1150	Cravat Coal Co.
810	Belmont	Bt-1171	D-0674	Marietta Coal Co.
811	Belmont	Bt-M3	D-1134	Marietta Coal Co.
812	Belmont	Bt-M4	D-1135	Marietta Coal Co.
813	Belmont	Bt-M5	D-1138	Marietta Coal Co.
814	Belmont	Bt-M6	D-1152	Marietta Coal Co.
815	Carroll	Cl-M	D-1145	Myers Mining
816	Carroll	Cl-T	D-1141	Triple A Construction
817	Columbiana	Ca-BI1	D-1154	Buckeye Industrial Mining Co.
818	Columbiana	Ca-BI2	D-1140	Buckeye Industrial Mining Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
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COAL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
819	Coshocton	Cn-B	D-1142	BRYCO
820	Coshocton	Cn-RF5	D-1129	R & F Coal Co.
821	Coshocton	Cn-RF6	D-1071-1	R & F Coal Co.
822	Gallia	Ga-VFL	IM-1314	VFL Technologies
823	Guernsey	Gy-OM	D-1040	Oxford Mining
824	Harrison	Hn-N	D-1143	Cravat Coal Co.
825	Jackson	Jkn-S3	D-1137	Sands Hill Coal Co., Inc.
826	Jefferson	Jfn-FM	D-1147	F & M. Coal Co.
827	Mahoning	Mg-EM	IM-1056	ESSROC Cement Corp.
828	Tuscarawas	Ts-BJ	IM-1285	Blue Jay Enterprises of Ts. Co., Inc.
829	Tuscarawas	Ts-H3	D-1146	Holmes Limestone Co.
830	Tuscarawas	Ts-K5	D-1133	Kimble Clay & Limestone Co.
831	Stark	Sk-205	D-1144	ENZ, Inc.

COAL-PREPARATION PLANTS ●

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
3	Belmont	Bt-936	D-0216	Marietta Coal Co.
4	Belmont	Bt-68	D-0360	Ohio Valley Coal Co.
5	Columbiana	Ca-879	D-0806	Buckeye Industrial Mining Co.
6	Columbiana	Ca-892	D-0806	C & E Coal, Inc.
7	Coshocton	Cn-810	D-0599	Conesville Coal Preparation Co.
9	Jackson	Jkn-1055	D-0347	Sands Hill Coal Co., Inc.
10	Jackson	Jkn-367	D-0285	Waterloo Coal Co., Inc.
13	Mahoning	Mg-623	D-0214	East Fairfield Coal Co.
14	Meigs	Ms-293	D-0354	Southern Ohio Coal Co.
15	Monroe	Me-4	D-0422	Quarto Mining Co. (subsidiary of Consolidated Coal Co.)
16	Morgan	Ne-41	D-0420	Central Ohio Coal Co.
20	Tuscarawas	Ts-1938	D-0264	Central Fuel Co.
21	Tuscarawas	Ts-1942	D-0287	Holmes Limestone Co.
22	Vinton	Vn-145	D-0159	Waterloo Coal Co., Inc.
24	Vinton	Vn-641	D-0169	Sands Hill Coal Co., Inc.
27	Wayne	Hs-79	D-0283	Holmes Limestone Co.
29	Columbiana	Ca-932	D-0532	Buckeye Industrial Mining Co.
30	Harrison	Hn-169	D-0424	Harrison Processing Corp.
32	Tuscarawas	Ts-HC	D-0981	Holmes Limestone Co.
33	Columbiana	Ca-505	D-0223	State Line Resources, Inc.

LIMESTONE/DOLOMITE ■

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
1	Adams	Ads-1	IM-237	Davon, Inc.
3	Allen	An-1	IM-485	Bluffton Stone Co.
5	Allen	An-3	IM-484	National Lime & Stone Co.
7	Allen	An-4	IM-491	Suever Stone Co., Inc.
9	Athens	As-533	IM-17	R. A. Eberts Co., Inc.
10	Auglaize	Ae-31	IM-744	Con-Ag, Inc.
11	Auglaize	Ae-10	IM-486	National Lime & Stone Co.
12	Belmont	Bt-716	IM-1	Ayers Limestone Quarry, Inc.
16	Clark	Ck-1	IM-373	Martin Marietta Aggregates
17	Clinton	Cln-1	IM-241	Melvin Stone Co.
18	Crawford	Cd-1	IM-404	National Lime & Stone Co.
19	Darke	Dke-1	IM-362	Martin Marietta Aggregates
20	Delaware	Del-4	IM-262	Martin Marietta Aggregates
21	Delaware	Del-5	IM-207	National Lime & Stone Co.
22	Delaware	Del-3	IM-327	Martin Marietta Aggregates
23	Delaware	Del-2	IM-299	Perry Stone Co.
24	Erie	Ee-27	IM-608	Erie Blacktop, Inc.
25	Erie	Ee-11	IM-263	Rogers Group, Inc.
26	Erie	Ee-1	IM-310	Wagner Quarries Co.
27	Fayette	Fe-2	IM-169	Martin Marietta Aggregates

**NUMERICAL INDEX OF OPERATORS OF MINES
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LIMESTONE/DOLOMITE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
28	Fayette	Fe-1	IM-831	Melvin Stone Co.
30	Franklin	Fn-2	IM-261	Martin Marietta Aggregates
31	Franklin	Fn-53	IM-185	Martin Marietta Aggregates
32	Greene	Ge-17	IM-435	Martin Marietta Aggregates
33	Clark	Ge-1	IM-393	Southdown Inc.
34	Greene	Ge-9	IM-364	Southdown Inc.
38	Hardin	Hdn-2	IM-443	Hardin Quarry Co., Inc.
41	Highland	Hd-2	IM-230	Davon, Inc.
42	Highland	Hd-3	IM-253	Ohio Asphaltic Limestone Corp.
43	Highland	Hd-4	IM-406	Marshall Quarry, Inc.
44	Holmes	Hs-67	IM-768, IM-3	Holmes Limestone Co.
47	Jackson	Jkn-367	D-0594, D-0968, D-1083, D-892	Waterloo Coal Co., Inc.
49	Logan	Lgn-1	IM-574	Martin Marietta Aggregates
50	Logan	Lgn-15	IM-453	C. E. Duff & Son, Inc.
51	Logan	Lgn-2	IM-494	Shelly Materials
52	Lucas	Ls-1	IM-575	Benchmark Materials
53	Lucas	Ls-3	IM-580	Benchmark Materials
54	Lucas	Ls-2	IM-503	Stoneco, Inc.
56	Mahoning	Mg-54	IM-93	Honey Creek Stone Co.
57	Mahoning	Mg-608	IM-4	ESSROC Cement Corp.
59	Marion	Mn-2	IM-423	J. M. Hamilton & Sons Co., Inc.
60	Marion	Mn-3	IM-168	National Lime & Stone Co.
61	Marion	Mn-1	IM-250	Tri-County Limestone Co.
62	Mercer	Mr-1	IM-592	Stoneco, Inc.
63	Mercer	Mr-2	IM-430	Morrow Gravel Co.
64	Miami	Mi-1	IM-382	Piqua Materials, Inc.
66	Miami	Mi-502	IM-414	Barrett Paving Materials, Inc.
67	Miami	Mi-10	IM-335	C. F. Poeppelman, Inc.
70	Montgomery	My-1	IM-374	Martin Marietta Aggregates
71	Montgomery	My-23	IM-368	Martin Marietta Aggregates
72	Montgomery	My-58	IM-330	Southdown Inc.
73	Morgan	Mon-600	D-1034	Central Ohio Coal Co.
75	Muskingum	Mum-106	IM-297	Chesterhill Stone Co.
78	Muskingum	Mum-104	IM-277	Sidwell Materials
80	Noble	Ne-86	IM-70	Zerger's Quarry
82	Ottawa	Oa-6	IM-296	White Rock Quarry, L.P.
83	Ottawa	Oa-14	IM-320	Stoneco, Inc.
84	Ottawa	Oa-7	IM-440	Lafarge Corp.
85	Ottawa	Oa-1	IM-292	GenLime Group, L.P.
86	Paulding	Pg-7		Benchmark Materials
87	Paulding	Pg-1	IM-513	Lafarge Corp.
88	Paulding	Pg-2	IM-481	Stoneco, Inc.
89	Perry	Py-235	IM-515	Maxville Quarries, Inc.
91	Pike	Pke-13	IM-213	Latham Limestone, Inc.
92	Pickaway	Pky-4	IM-209	Melvin Stone Co.
95	Preble	Pre-5	IM-447	Wysong Stone Co.
98	Putnam	Pm-2	IM-570	Putnam Stone Co.
101	Sandusky	Sy-5	IM-259	Gotttron Bros. Co.
102	Sandusky	Sy-1	IM-537	Martin Marietta Magnesia Specialties, Inc.
103	Sandusky	Sy-4	IM-381	Redland Ohio, Inc.
104	Sandusky	Sy-3	IM-282	Redland Ohio, Inc.
106	Seneca	Sa-2	IM-352	Maple Grove Stone Co.
107	Seneca	Sa-1	IM-347	Benchmark Materials
108	Seneca	Sa-3	IM-349	Benchmark Materials
109	Seneca	Sa-8	IM-313	North Shore Stone Quarries, Inc.
110	Shelby	Shy-6	IM-389	Miami River Stone Co.
111	Shelby	Shy-16	IM-411	Miami River Stone Co.
112	Shelby	Shy-15	IM-387	Spring Creek Corp.
117	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
119	Union	Un-1	IM-208	Shelly Materials
120	Union	Un-2	IM-236	Shelly Materials
121	Van Wert	Vt-3	IM-495	Stoneco, Inc.
122	Van Wert	Vt-7	IM-642	Ridge Township Quarry
123	Van Wert	Vt-1	IM-500	Suever Stone Co., Inc.
124	Vinton	Vn-174	D-0309	Clinton Stone, Inc.

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LIMESTONE/DOLOMITE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
129	Wood	Wd-5	IM-473	Custar Stone Co.
130	Wood	Wd-1	IM-548	MacRitchie Materials, Inc.
131	Wood	Wd-6	IM-480	Stoneco, Inc.
132	Wood	Wd-11	IM-475	Stoneco, Inc.
133	Wyandot	Wt-3	IM-298	McCarthy Stone Quarry
134	Wyandot	Wt-1	IM-405	National Lime & Stone Co.
135	Wyandot	Wt-8	IM-273	Wyandot Dolomite, Inc.
142	Greene	Ge-25	IM-437	Martin Marietta Aggregates
143	Montgomery	My-73	IM-330	Martin Marietta Aggregates
144	Muskingum	Mum-269	IM-1009	Salt Creek Materials, Inc.
147	Guernsey, Muskingum	Gy-309	IM-1030	King Limestone, Inc.
148	Vinton	Vn-190	D-0761	Quality Stone Co.
149	Hancock	Hk-7	IM-1002	National Lime & Stone Co.
152	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co., Inc.
153	Coshocton	Cn-A	IM-1011	Jim Romig Excavating
154	Franklin	Fn-43	IM-188	Olen Corp.
155	Greene	Ge-45	IM-364	Martin Marietta Aggregates
156	Hardin	Hdn-S	IM-1034	C. E. Duff & Son, Inc.
158	Jackson	Jkn-SH	IM-1068	Sands Hill Coal Co., Inc.
159	Lawrence	Le-B	IM-1188, D-0746	Belville Mining Co., Inc.
160	Lucas	Ls-12	IM-953	Barrett Paving Materials, Inc.
161	Mahoning	Mg-629	IM-1008	Blum Mining
162	Mahoning	Mg-EM	IM-1056	ESSROC Cement Corp.
163	Monroe	Me-C	IM-1088	Christman Quarry
164	Monroe	Me-509	IM-1094	Rubel Quarry, Inc.
166	Noble	NE-C	D-0820	Central Ohio Coal Co.
167	Noble	Ne-S	IM-913	Sharon Stone Co.
168	Perry	Py-343	IM-1061	Maxville Quarries, Inc.
169	Tuscarawas	Ts-2024	IM-1087	Green Basin Coal, Inc.
170	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
171	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
173	Adams	Ads-H	IM-805	Holloway Sand & Gravel Co., Inc.
174	Erie	Ee-K	IM-727	Kellstone, Inc.
175	Highland	Hd-D	IM-1170	Martin Marietta Aggregates
176	Harrison, Jefferson	Jfn-K	IM-1164	K.C.C.I.
177	Miami	Mi-BPM	IM-1169	Barrett Paving Materials, Inc.
178	Montgomery	My-Q	IM-860	Quarry Trails
179	Noble	Ne-B	IM-897	B & N Coal, Inc.
180	Ottawa	Oa-18	IM-635	Fox Stone Products, Inc.
181	Tuscarawas	Ts-B	IM-49	Belden Brick Co.
182	Vinton	Vn-193		Quality Stone Co.
183	Wood	Wd-14	IM-1157	Precision Aggregate, Inc.
184	Brown	Bn-EC	IM-1195	Davon, Inc.
185	Muskingum	Mum-907	IM-1200	Pleasant Valley Limestone
186	Muskingum	Mum-SB	IM-1212, IM-1269	Sidwell Materials
187	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
188	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.
191	Tuscarawas	Ts-BB	IM-1221	Belden Brick Co.
192	Columbiana	Ca-BIM	IM-1271	Buckeye-Industrial Mining Co.
193	Hamilton	Hmn-72	IM-1264	Rumpke Mountain Mining Co.
194	Noble	Ne-K	IM-1254	King Quarries, Inc.
195	Belmont	Bt-N	IM-1283	Northshore Coal, Inc.
196	Hancock	Hk-A	IM-1299	Adrian Sand & Stone
197	Noble	Ne-K1	IM-1292	King Quarries, Inc.
198	Ottawa	Oa-BC	IM-1288	Baycliffs Corp.
199	Ross	Rs-MC1	IM-1298	M. C. Trucking Co.
200	Tuscarawas	Ts-BJ	IM-1285	Blue Jay Enterprises of Ts. Co., Inc.
201	Belmont	BT-B	D-998	Northshore Coal, Inc.
202	Greene	Ge-8	IM-364	Southdown Inc.
203	Muskingum	Mum-SD	IM-1313	Sidco Development, Inc.
205	Stark	Sk-208	D-1015, D-1144	ENZ, Inc.
206	Tuscarawas	Ts-1939	IM-47	Belden Brick Co.
207	Tuscarawas	Ts-520	IM-214	Blue Jay Enterprises of Ts. Co., Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1997 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

SAND AND GRAVEL DREDGING OPERATION △

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
1	Lake Erie	Ee-dredge		Erie Sand & Gravel Co.
2	Lake Erie	Lke-dredge		Osborne Materials Co.

SAND AND GRAVEL ▲

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
2	Allen	An-15	IM-721	Ward Materials, Inc.
6	Ashland	Ald-9	IM-745	Ries Sand & Gravel
8	Ashland	Ald-7	IM-392	Young's Sand & Gravel Co.
9	Ashtabula	Asa-10	IM-198	Frye Sand & Gravel, Inc.
10	Ashtabula	Asa-14	IM-563	Janson's Soil Service, Inc.
14	Ashtabula	Asa-12	IM-1130	Nelson Sand & Gravel, Inc.
15	Ashtabula	Asa-15	IM-783	R. W. Sidley, Inc.
19	Athens	As-588	IM-630	Black Top Contracting, Inc.
21	Athens	As-1161	IM-97	Lake Hope Asphalt, Inc.
23	Auglaize	Ae-23	IM-508	Joseph Sand & Gravel, Inc.
24	Auglaize	Ae-30	IM-598	National Lime & Stone Co.
25	Auglaize	Ae-16	IM-595	Quality Ready Mix, Inc.
26	Belmont	Bt-74	IM-288	Tri-State Asphalt Products
28	Butler	Br-36	IM-649	Bill D. Colwell
29	Butler	Br-5	IM-153	Martin Marietta Aggregates
30	Butler	Br-35	IM-200	Martin Marietta Aggregates
31	Butler	Br-48	IM-562	Broshear Contractors, Inc.
32	Butler	Br-50	IM-739	Dingledine Basic Materials, Inc.
33	Butler	Br-14	IM-147	Martin Marietta Aggregates
34	Butler	Br-29	IM-149	Martin Marietta Aggregates
37	Butler	Br-40	IM-493	Gaston Bowling, Inc.
38	Butler	Br-52	IM-814	Shamrock Materials, Inc.
39	Butler	Br-15	IM-316	Mecco, Inc.
41	Butler	Br-6	IM-177	Moraine Materials Co., Inc.
42	Butler	Br-3	IM-719	The Gravel Co.
44	Butler	Br-47	IM-111	Watson Gravel, Inc.
45	Butler	Br-38	IM-218	Welch Sand & Gravel, Inc.
47	Carroll	Cl-204	IM-554	Oneida Sand & Gravel, Inc.
48	Champaign	Cpn-1	IM-371	Morrow Gravel Co.
49	Champaign	Cpn-21	IM-616	D. & W. Sand & Gravel
50	Champaign	Cpn-22	IM-889	Mechanicsburg Sand & Gravel, Inc.
51	Champaign	Cpn-20	IM-482	Moore's Excavating Co.
52	Clark	Ck-13	IM-366	Martin Marietta Aggregates
54	Clark	Ck-502	IM-375	Demmy Sand & Gravel
57	Clark	Ck-3	IM-463	Enon Washed Sand & Gravel Co.
58	Clark	Ck-25	IM-358	Shelly Materials
59	Clermont	Ct-9	IM-526	Barrett Paving Materials, Inc.
61	Clermont	Ct-7	IM-432	Kipp's Gravel Co., Inc.
68	Columbiana	Ca-881	IM-611	X L Sand & Gravel
69	Coshocton	Cn-718	IM-227	Apache Aggregate & Paving Co.
70	Coshocton	Cn-783	IM-717	Apache Aggregate & Paving Co.
71	Coshocton	Cn-694	IM-293	Shelly Materials
72	Coshocton	Cn-624	IM-243	Shady Bend Sand & Gravel
80	Darke	Dke-4	IM-433	Foureman's Sand & Gravel, Inc.
81	Darke	Dke-10	IM-326	Hollinger Excavating
82	Defiance	De-2	IM-765	Hillsdale Sand & Gravel, Inc.
83	Erie	Ee-18	IM-676	Erie Materials, Inc.
84	Erie	Ee-29		Jarrett Sand Co.
85	Erie	Ee-5		Keener Sand & Clay Co.
92	Fairfield	Fd-13	IM-848	Shelly Materials
94	Franklin	Fn-36	IM-302	Agg Rok Materials
95	Franklin	Fn-6	IM-185	Martin Marietta Aggregates
96	Franklin	Fn-23	IM-183	Martin Marietta Aggregates
97	Franklin	Fn-14	IM-832	Big Walnut Sand & Gravel, Inc.
98	Franklin	Fn-52	IM-191	JP Sand & Gravel Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1997 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
100	Franklin	Fn-11	IM-234	Mason's Sand & Gravel Co.
101	Franklin	Fn-24	IM-266	S & S Aggregate, Inc.
102	Franklin	Fn-43	IM-188	Olen Corp.
108	Geauga	Gea-29	IM-215	Haueter Sand & Gravel, Inc.
109	Geauga	Gea-35	IM-321	Teague Gravel Co., Inc.
110	Greene	Ge-33	IM-379	Martin Marietta Aggregates
112	Clark, Greene	Ge-4	IM-394	Hilltop Basic Resources, Inc.
115	Greene	Ge-36	IM-305	Phillips Sand & Gravel
117	Greene	Ge-10	IM-518	Xenia Sand, Gravel, & Asphalt Co.
118	Hamilton	Hmn-37	IM-170	Martin Marietta Aggregates
119	Hamilton	Hmn-AAC	IM-716	Martin Marietta Aggregates
120	Hamilton	Hmn-54	IM-710	Ashcraft Sand & Gravel, Inc.
121	Hamilton	Hmn-44	IM-120	Crosby Gravel
123	Hamilton	Hmn-50	IM-205	James Bunnell, Inc.
124	Hamilton	Hmn-59	IM-812, IM-815	James Bunnell, Inc.
126	Hamilton	Hmn-3	IM-137, IM-821	Martin Marietta Aggregates
127	Hamilton	Hmn-5	IM-148	Martin Marietta Aggregates
131	Hamilton	Hmn-68	IM-747	Martin Marietta Aggregates
132	Hamilton	Hmn-46	IM-396	Eaton Sand & Gravel Co.
134	Hamilton	Hmn-71	IM-771	Powell Gravel & Topsoil, Inc.
135	Hamilton	Hmn-17	IM-295	Harrison Sand & Gravel Co.
137	Hamilton	Hmn-67	IM-529	Leonard Sand & Gravel
139	Hamilton	Hmn-10	IM-226	Rack Sand, Inc.
141	Hamilton	Hmn-28	IM-353	The Gravel Co.
142	Hamilton	Hmn-60	IM-761	Watson Gravel, Inc.
143	Hamilton	Hmn-42	IM-823	Welch Sand & Gravel, Inc.
144	Hamilton	Hmn-48	IM-220	Welch Sand & Gravel, Inc.
151	Hocking	Hg-262	IM-41	Hocking Valley Concrete, Inc.
152	Hocking	Hg-301	IM-458	Muskingum River Gravel Co.
153	Holmes	Hs-82	IM-707	Menuet Bros. Sand & Gravel, Inc.
154	Holmes	Hs-511	IM-1048, IM-1240	Feikert Sand & Gravel, Inc.
157	Huron	Hrn-1	IM-550	Rogers Group, Inc.
160	Knox	Kx-7	IM-235	Shelly Materials
161	Knox	Kx-16	IM-793	Olen Corp.
162	Knox	Kx-5	IM-1307	Small's Sand & Gravel, Inc.
163	Knox	Kx-3	IM-300	Sant Sand & Gravel, Inc.
165	Knox	Kx-15	IM-967	Small's Sand & Gravel, Inc.
166	Lake	Lke-7	IM-162	R. W. Sidley, Inc.
167	Lawrence	Le-430	IM-844	B & L Sand Co.
170	Lawrence	Le-426	IM-856	Burlington Sand & Gravel Co.
174	Licking	Lg-2	IM-184	Doug Mill
176	Licking	Lg-31	IM-246	Olen Corp.
179	Licking	Lg-10	IM-217	Van Wey Sand & Gravel, Inc.
180	Licking	Lg-15		Walter's Gravel
182	Logan	Lgn-31	IM-454	C. E. Duff & Son, Inc.
183	Logan	Lgn-39	IM-887	C. E. Duff & Son Inc
189	Logan	Lgn-6	IM-459	Neer's Sand & Gravel
191	Lorain	Ln-12	IM-731	Guy Schieve
195	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.
196	Mahoning	Mg-632	IM-808	Solomon's Mines, Inc.
197	Marion	Mn-16	IM-171	Fleming Construction Co., Inc.
198	Marion	Mn-4	IM-290	Penry Stone Co.
200	Marion	Mn-10	IM-196	Shelly Materials
203	Medina	Ma-20	IM-448	Baker Sand, Inc.
206	Medina	Ma-22	IM-425, IM-442, IM-650, IM-651	Seville Sand & Gravel, Inc.
209	Meigs	Ms-205	IM-30	Martin Marietta Aggregates
211	Meigs	Ms-301	IM-619	Meigs County Commissioners
212	Meigs	Ms-298	IM-32	Shelly Materials
216	Miami	Mi-6	IM-356	Martin Marietta Aggregates
217	Miami	Mi-501		New Carlisle Sand & Gravel Co.
219	Miami	Mi-3	IM-462, IM-658	Martin Marietta Aggregates
220	Miami	Mi-8	IM-355	Martin Marietta Aggregates
221	Miami	Mi-9	IM-408	Wise Gravel
222	Miami	Mi-4	IM-472	Fenner Sand & Gravel, Inc.
224	Montgomery	My-66	IM-677	Martin Marietta Aggregates

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SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
225	Montgomery	My-65	IM-594	Broadway Sand & Gravel, Inc.
232	Montgomery	My-19	IM-401, IM-916	Hilltop Basic Resources, Inc.
233	Montgomery	My-52	IM-348	Miller Bros. Gravel, Inc.
236	Montgomery	My-55	IM-571	Taylorville Rd. Hardfill
238	Montgomery	My-61	IM-468	Tipp Stone Co., Inc.
239	Montgomery	My-41	IM-360	Moraine Materials Co., Inc.
240	Morgan	Mon-588	IM-35	Chesterhill Stone Co.
242	Morrow	Mw-10	IM-258	Chesterville Sand & Gravel Co., Inc.
243	Muskingum	Mum-863	IM-264	Shelly Materials
244	Muskingum	Mum-799	IM-317	Shelly Materials
247	Muskingum	Mum-228	IM-421	Muskingum River Gravel Co.
248	Muskingum	Mum-216	IM-689	Salt Creek Materials
251	Pickaway	Pky-1	IM-428	Melvin Stone Co.
252	Pike	Pke-26	IM-142	Valley Materials Co.
253	Pike	Pke-23	IM-242	Davon, Inc.
254	Pike	Pke-30	IM-786	South Central Sand & Gravel
255	Pike	Pke-24	IM-222	Davon Inc.
256	Portage	Pe-50	IM-96	Beck Sand & Gravel, Inc.
257	Portage	Pe-15	IM-104	Karl Brugmann Sand & Gravel, Inc.
258	Portage	Pe-9	IM-119	Oscar Brugmann Sand & Gravel, Inc.
259	Portage	Pe-17	IM-123	Charlestown Sand & Gravel, Inc.
260	Portage	Pe-84	IM-868	Twinsburg Development Corp.
261	Portage	Pe-45	IM-139	R. A. Cruise Sand & Gravel, Inc.
262	Portage	Pe-56	IM-127	Hilltop Aggregate, Inc.
264	Portage	Pe-10	IM-138	Hugo Sand Co.
265	Portage	Pe-63	IM-82	Jefferson Materials Co.
268	Portage	Pe-40	IM-190	Lakeside Sand & Gravel Co.
272	Portage	Pe-39	IM-1078	Miller Sand & Gravel, Inc.
273	Portage	Pe-85	IM-700	Rockwell Sand & Gravel, Inc.
274	Portage	Pe-60	IM-78	Schloss Materials Co.
275	Portage	Pe-18	IM-193	Sober Sand & Gravel Co.
276	Portage	Pe-36	IM-90	Solon Excavators Sand & Gravel, Inc.
277	Portage	Pe-68	IM-660, IM-1047, IM-1107, IM-1124	Lafarge Corp.
280	Portage	Pe-64	IM-1017	Rainbow Sand & Gravel, Inc.
281	Portage	Pe-59	IM-210	S & S Aggregate, Inc.
282	Portage	Pe-67	IM-202	S & S Aggregate, Inc.
284	Preble	Pre-7	IM-306	Southern Ohio Aggregates, Inc.
285	Preble	Pre-4	IM-477	Wysong Gravel Co.
286	Preble	Pre-6	IM-478	Wysong Gravel Co.
287	Richland	Rd-4	IM-279, IM-1255	D. H. Bowman & Sons, Inc.
289	Richland	Rd-18	IM-670	Ganges Gravel Co.
290	Richland	Rd-14	IM-436	John L. Garber Materials, Inc.
292	Richland	Rd-5	IM-470	S & S Aggregate, Inc.
297	Ross	Rs-26	IM-922	Elm Spring Farm
303	Scioto	So-98	IM-474	E. E. Blair Construction Co.
304	Scioto	So-83	IM-211	Cunningham Asphalt Paving, Inc.
305	Scioto	So-78		E. A. Schilling & Sons, Inc.
306	Scioto	So-79	IM-221	ATS Enterprises
310	Shelby	Shy-12	IM-528	Fleckenstein Farm Gravel Pit
311	Shelby	Shy-17	IM-389	Miami River Stone
312	Shelby	Shy-13	IM-412	Miami River Stone Co.
314	Shelby	Shy-11	IM-743	Spring Creek Corp.
315	Shelby	Shy-18	IM-388	Spring Creek Corp.
316	Stark	Sk-N	IM-156	Northern Ohio Paving Co.
318	Stark	Sk-681	IM-164	Canton Aggregate
319	Stark	Sk-689	IM-173	Canton Aggregate
320	Stark	Sk-694	IM-858	A. J. Diana Sons, Inc.
325	Stark	Sk-607	IM-102	Canton Aggregate
326	Stark	Sk-165	IM-192	Oster Sand & Gravel, Inc.
327	Summit	St-52	IM-900	Flesher Sand & Gravel, Inc.
333	Summit	St-24	IM-239	Riverside Sand & Gravel Co., Inc.
334	Summit	St-9	IM-167	Rubber City Sand & Gravel Co.
335	Summit	St-26	IM-803	Spring Valley Investments, Inc.
336	Summit	St-44	IM-178	S & S Aggregate, Inc.
340	Trumbull	Tl-12	IM-131	Samco, Inc.

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SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
343	Tuscarawas	Ts-1826	IM-88	Soehnen Bros. Sand & Gravel, Inc.
344	Tuscarawas	Ts-1771	IM-77	Spring Industries, Inc.
346	Tuscarawas	Ts-111	IM-55	Stewart & Reichman, Inc.
347	Tuscarawas	Ts-69	IM-51	Stocker Sand & Gravel Co.
348	Tuscarawas	Ts-125	IM-50	Stocker Sand & Gravel Co.
349	Warren	Wan-38	IM-615	Martin Marietta Aggregates
352	Warren	Wan-41	IM-629	Carl E. Oeder & Sons Sand & Gravel
356	Warren	Wan-47	IM-846	C. & S. Contractors
363	Warren	Wan-10	IM-465	Watson Gravel, Inc.
364	Washington	Wn-55	IM-669	Beverly Slag Co.
365	Washington	Wn-508	IM-57	Briggs Sand & Gravel, Inc.
367	Washington	Wn-38	IM-701	Muskingum River Gravel Co.
369	Washington	Wn-510	IM-25	Trout Sand & Gravel Co.
372	Wayne	We-11	IM-547	Prairie Lane Sand & Gravel Co.
373	Wayne	We-7	IM-471	Rupp Construction, Inc.
374	Wayne	We-15	IM-398	Zollinger Sand & Gravel Co.
375	Williams	Ws-6	IM-497	Stoneco, Inc.
376	Williams	Ws-9	IM-498	Stoneco, Inc.
377	Williams	Ws-11	IM-509, IM-661	Weber Sand & Gravel, Inc.
378	Williams	Ws-14	IM-614	Winzeler Excavating Co.
379	Wyandot	Wt-4	IM-520	Precision Aggregate, Inc.
380	Wyandot	Wt-15	IM-376	National Lime & Stone Co.
381	Wyandot	Wt-18	IM-551	National Lime & Stone Co.
382	Wyandot	Wt-17	IM-604	Kirby's Sand & Gravel, Inc.
384	Summit	St-53	IM-874	Portage Lakes Sand & Gravel
385	Clark	Ck-501	IM-340	Demmy Construction, Inc.
386	Stark	Sk-203	IM-654	American Sand & Gravel, Inc.
387	Portage	Pe-95	IM-212	American Sand & Gravel
389	Tuscarawas	Ts-1976	IM-942, IM-1235	Goshen Sand & Gravel
390	Miami	Mi-T	IM-696	Lloyd B. Fry
391	Warren	Wan-B	IM-679	Little Miami Sand & Gravel
395	Scioto	So-100	IM-950	Scioto Valley Resources
401	Fairfield	Fd-14	IM-933	Paul D. Beery Trucking Co.
403	Greene	Ge-40	IM-923	R.J. Martin Service & Excavating
404	Greene	Ge-42	IM-954	Martin Marietta Aggregates
405	Greene	Ge-32	IM-400	Martin Marietta Aggregates
407	Hamilton	Hmn-69	IM-969	Martin Marietta Aggregates
408	Knox	Kx-17	IM-968	Small's Sand & Gravel, Inc.
409	Richland	Rd-20	IM-617	Bartley & Bolin Excavating
412	Ashland	Ald-15	IM-944	Young's Sand & Gravel Co.
413	Ashtabula	Asa-18	IM-949	Simak Trucking, Inc.
415	Geauga	Gea-9	IM-132	Soltis Sand & Gravel
416	Holmes	Hs-96	IM-997	Spring Run Gravel
417	Huron	Hrn-16	IM-975	Erie Blacktop, Inc.
419	Licking	Lg-504	IM-991	Gary Roberts Excavating
420	Logan	Lgn-36	IM-1007	C. E. Duff & Son, Inc.
423	Marion	Mn-19	IM-990	Fleming Construction Co., Inc.
424	Monroe	Me-508	IM-1000	Ohio-West Virginia Excavation
427	Summit	St-54	IM-934	R. & S., Inc.
428	Tuscarawas	Ts-2001	IM-1004	Newton Asphalt Paving, Inc.
429	Warren	Wan-46	IM-842	Little Miami Sand & Gravel
430	Warren	Wan-50	IM-1006	L & I Natural Resources, Inc.
432	Washington	Wn-54	IM-383	Atlas Towing Co.
435	Stark	Sk-173	IM-879	Allied Corp., Inc.
437	Clark	Ck-7	IM-449	City of Springfield
438	Coshocton	Cn-828	IM-1026	William Albert, Inc.
440	Gallia	Ga-626	IM-1046	Cremeans Concrete & Supply
441	Greene	Ge-38	IM-333	Watson Gravel, Inc.
444	Logan	Lgn-12	IM-1071	C. E. Duff & Son, Inc.
446	Miami	Mi-12	IM-467	Tipp Stone Co., Inc.
447	Miami	Mi-504	IM-1032	Shelly Materials
448	Muskingum	Mum-262	IM-422	Muskingum River Gravel Co.
451	Portage	Pe-89	IM-1142	Green Oaks Potting Products, Inc.
452	Ross	Rs-M	IM-114	Muskingum River Gravel Co.
453	Stark	Sk-241	IM-582	Lafarge Corp.

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SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
455	Stark	Sk-243	IM-908	American Sand & Gravel, Inc.
458	Athens	As-595	IM-1083	Cochran Transportation Services, Inc.
459	Athens	As-W	IM-979	Olen Corp.
460	Butler	Br-S	IM-1053	Southern Ohio Aggregates, Inc.
461	Clark	Ck-28	IM-1100	Barrett Paving Materials, Inc.
463	Columbiana	Ca-982	IM-1108	Leetonia Sand & Gravel Co., Inc.
465	Franklin	Fn-58	IM-1023	Olen Corp.
466	Gallia	Ga-O	IM-1028	Ours Sand & Gravel
467	Hamilton	Hmn-AS	IM-1106	Allgeier & Son, Inc.
468	Hamilton	Hmn-D	IM-1079	Martin Marietta Aggregates
470	Holmes	Hs-J	IM-1043	S & S Transport, Inc.
472	Lucas	Ls-G	IM-1090	H. T. Griffin Excavating, Inc.
474	Madison	Mdn-11	IM-1063	Tuffco Sand & Gravel, Inc.
475	Mahoning	Mg-630	IM-1091	Wallace Road Sand & Gravel
476	Mahoning	Mg-629	IM-1008	Blum Mining
480	Pickaway	Pky-H	IM-1039	William A. Hoffman, Jr.
481	Pickaway	Pky-R	IM-993 , IM-1204	Melvin Stone Co.
482	Portage	Pe-61	IM-1064	Red Brush Peat Co.
483	Portage	Pe-92	IM-522	Don Wartko Construction, Inc.
488	Preble	Pre-9	IM-1095	Loxley Aggregates, Inc.
490	Ross	Rs-27	IM-1098	Shelly Materials
491	Ross	Rs-H	IM-1052	Haubeil & Sons Asphalt & Materials, Inc.
494	Shelby	Shy-SC	IM-1018	Spring Creek Corp.
495	Stark	Sk-M	IM-1031	Massillon Materials, Inc.
496	Summit	St-55	IM-589	Alden Sand & Gravel Co.
500	Tuscarawas	Ts-2018	IM-1076	State Rte. 416 Sand & Gravel
501	Warren	Wan-M	IM-728, IM-1065	Morrow Gravel Co.
502	Warren	Wan-M1	IM-1051	Morrow Gravel Co.
503	Warren	Wan-M2	IM-837	Morrow Gravel Co.
504	Washington	Wn-1007	IM-1042	Mark Williams Blacktop Co., Inc.
506	Williams	Ws-T	IM-1022	Stoneco, Inc.
508	Ashland	Ald-G	IM-1121	Joyce A. Good
509	Ashland	Ald-16	IM-1120	Bartley & Bolin Excavating
510	Ashtabula	Asa-N	IM-1109	Nelson Sand & Gravel, Inc.
517	Geauga	Gea-N	IM-1123	Newbury Sand & Gravel
518	Geauga	Gea-TK	IM-902	T & K Kuhnle Co.
519	Hamilton	Hmn-B	IM-1139	James Bunnell, Inc.
520	Hamilton	Hmn-C	IM-1132	Nelson Stark Co.
521	Hamilton	Hmn-AS1	IM-797	Allgeier & Son, Inc.
523	Hocking	Hg-329	IM-1112	Kilbarger Construction, Inc.
526	Logan	Lgn-M	IM-799	Miller Bros. Construction, Inc.
528	Portage	Pe-SSC	IM-318	Sunshine Sand Co.
529	Portage	Pe-96	IM-792	Don's Dozer Service, Inc.
530	Ross	Rs-R	IM-1143	Ross County Gravel Co.
533	Washington	Wn-1008	IM-1111	Grimes Excavating
534	Washington	Wn-1009	IM-525	Mark Williams Blacktop Co., Inc.
535	Wayne	We-23	IM-1136	Buckeye Excavating Development, Inc.
538	Columbiana	Ca-993	IM-1180	Willowbrook
539	Columbiana	Ca-351	IM-634	Inland South Aggregates
541	Fairfield	Fd-16	IM-1156	James E. Downard
544	Gallia	Ga-J	IM-1145	Jaymar, Inc.
545	Geauga	Gea-H	IM-510	Haueter Sand & Gravel, Inc.
546	Greene	Ge-46	IM-1149	Don Thompson Excavating, Inc.
547	Greene	Ge-R	IM-829	Richards Service Garage
548	Greene	Ge-47	IM-751	M. J. Coates Construction Co.
549	Greene	Ge-W	IM-645	Joann O. Weddle
550	Greene	Ge-G	IM-655	James D. Graham
551	Hamilton	Hmn-S	IM-746	Southern Ohio Aggregates, Inc.
552	Hamilton	Hmn-SO	IM-720	Southern Ohio Aggregates, Inc.
553	Hardin	Hdn-H	IM-864	Norman Harpster
556	Lucas	Ls-MH	IM-1144	Sandman Sand & Stone, Inc.
558	Medina	Ma-23	IM-1177	Friendsville Sand, L.P.
559	Meigs	Ms-L	IM-1159	Letart Corp.
560	Meigs	Ms-308	IM-1174	Letart Corp.
561	Montgomery	My-CW	IM-878	Carter & Carter, Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1997 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
562	Montgomery	My-R	IM-539	John P. Raisch, Inc.
563	Morgan	Mon-CSC	IM-1178	Chesterhill Stone Co.
565	Pickaway	Pky-W	IM-1176	Gene T. Wilson
568	Portage	Pe-101	IM-1154	D & K Materials, Inc.
569	Portage	Pe-SM	IM-499	Schloss Materials Co.
570	Portage	Pe-L	IM-154	Lucky Sand & Gravel Co.
571	Preble	Pre-AAC	IM-779	Martin Marietta Aggregates
573	Ross	Rs-E	IM-1168	David E. Edgington
575	Ross	Rs-P	IM-122	Mark E. Scott
576	Scioto	So-B	IM-705	Boone Coleman Construction, Inc.
577	Shelby	Shy-SS	IM-438	Miami River Stone Co.
578	Stark	Sk-MW	IM-1171	Canton Aggregate
579	Stark	Sk-W	IM-867	Ralph C. Wagner & Sons
581	Stark	Sk-R	IM-697	Oster Sand & Gravel, Inc.
582	Stark	Sk-SI	IM-588	Spring Industries, Inc.
583	Summit	St-50	IM-722	A-1 All Ohio Sand & Gravel Co.
584	Trumbull	TL-16	IM-1158	Nick's Trucking
586	Tuscarawas	Ts-2036	IM-1155	Oster Sand & Gravel, Inc.
587	Tuscarawas	Ts-2049	IM-1151	Al Gasser Excavating, Inc.
588	Tuscarawas	Ts-SI	IM-569	L & M Mineral Co.
589	Warren	Wan-7	IM-151	Embro, Inc.
590	Washington	Wn-1010	IM-1163	M & J Sand & Gravel, Inc.
591	Wyandot	Wt-K	IM-943	Kirby's Sand & Gravel, Inc.
593	Ashtabula	Asa-20	IM-1198	Kinsman Sand & Gravel Co.
595	Cuyahoga	Cya-42	IM-686	Boyas Excavating, Inc.
596	Hocking	Hg-G	IM-1201	Good Builders
597	Lake	Lke-C	IM-1215	Cashen, Inc.
598	Lake	Lke-D	IM-1187	DeMilta Sand & Gravel, Inc.
600	Licking	Lg-W	IM-1213	Eagle Contracting
602	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
605	Portage	Pe-102	IM-1184	Mary Ellen & Ray Patterson
606	Ross	Rs-T	IM-1189	Tackett Builders
607	Stark	Sk-BE	IM-1202	Beaver Excavating, Inc.
608	Stark	Sk-HS	IM-1193	Heiser Sand & Gravel Co.
609	Stark	Sk-HS1	IM-1203	Heiser Sand & Gravel Co.
610	Stark	Sk-1017	IM-1186	National Aggregates, Inc.
611	Trumbull	TL-C	IM-1190	Center West Enterprises, Inc.
612	Tuscarawas	Ts-A	IM-1218	Acme Sand & Gravel
613	Wayne	We-24	IM-1211	E. A. Construction, Inc.
615	Portage	Pe-98	IM-1231	Johnson Road Sand & Gravel
616	Ashland	Ald-Y	IM-1216	Young's Sand & Gravel Co.
617	Ashtabula	Asa-21	IM-1239	Sunrise Sand & Gravel
619	Champaign	Cpn-25	IM-1337	Moore's Excavating Co., T. K. Stone Co.
620	Clark	Ck-29	IM-1233	Moore's Excavating Co.
622	Fulton	Ftn-M	IM-1246	Al Mackey Enterprises, Inc.
623	Geauga	Gea-43	IM-1230	Solon Excavators Sand & Gravel, Inc.
625	Lake	Lke-CIR	IM-1243	C.I.R., Inc.
626	Muskingum	Mum-J	IM-1229	Glen James & Sons, Inc.
627	Pickaway	Pky-C	IM-1223	Valley Sand & Gravel, Inc.
628	Portage	Pe-OB	IM-1241	Oscar Bruggmann Sand & Gravel, Inc.
629	Richland	Rd-K	IM-1232	Leonard E. Kleilein
630	Scioto	So-102	IM-1250	T. T. & K. Construction, Inc.
631	Stark	Sk-CA	IM-1234	Canton Aggregate
633	Williams	Ws-21	IM-1225	Thiel Construction Co.
634	Williams	Ws-22	IM-1222	Heer Excavating, Inc.
635	Ashtabula	Asa-C	IM-1278	Clemson Excavating, Inc.
636	Columbiana	Ca-S	IM-1258	Solomon's Mines, Inc.
637	Erie	Ee-27	IM-608	Erie Blacktop, Inc.
639	Fulton	Ftn-M1	IM-1275	Al Mackey Enterprises, Inc.
641	Hamilton	Hmn-G	IM-1270	Golsch Construction, Inc.
642	Hamilton	Hmn-JC	IM-1267	Joe E. Carter
643	Holmes	Hs-VH	IM-1263	John Van Horn Trucking
644	Knox	Kx-1	IM-269	Ogleby Norton Industrial Sands, Inc.
645	Lucas	Ls-HI	IM-1277	Hidden Harbor Partners
646	Lucas	Ls-M	IM-1261	Al Mackey Enterprises, Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1997 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
647	Morgan	Mon-L	IM-1266	Link Trucking Co.
648	Pickaway	Fn-C	IM-1265	Complete Resources Co.
650	Ashtabula	Asa-F	IM-1289	Frye Sand & Gravel, Inc.
651	Ashtabula	Asa-M	IM-1301	Mathews Sand & Gravel
653	Columbiana	Ca-W	IM-1279	Carl Walter
654	Fulton	Ftn-BL1	IM-1282	B & L Excavating
655	Fulton	Ftn-M2	IM-1294	Al Mackey Enterprises, Inc.
656	Highland	Hd-L	IM-1297	LaMar Sand & Fill, Ltd.
657	Hocking	Hg-HV	IM-1284	Hocking Valley Mulch
658	Licking	Lg-S	IM-1281	Sleepy Hollow Sand & Gravel
659	Lucas	Ls-SMB	IM-1290	S. & M. Builders, Inc.
661	Portage	Pe-LS	IM-1293	Lakeside Sand & Gravel Co.
663	Scioto	So-BT	IM-1286	Big T Mining
664	Scioto	So-DGM	IM-1280	D.G.M., Inc.
665	Williams	Ws-N	IM-1291	Andy Nixon Contractors, Inc.
666	Wood	Wd-14	IM-1157	Precision Aggregate, Inc.
667	Butler	Br-57		Watson Gravel, Inc.
668	Coshocton	Cn-C	IM-1311	County Line Concrete & Supply Co.
669	Logan	Lgn-B	IM-1309	Boyd Excavating
670	Holmes	Hs-C	IM-1303	Craigton Shale Co.
671	Pickaway	Pky-DC	IM-1316	Darby Creek Excavating
672	Fulton	Ftn-SI	IM-1308	Sandco, Inc.
673	Portage	Pe-B1	IM-1296	Blue Stone Sand & Gravel, Inc.
674	Portage	Pe-B2	IM-1305	Blue Stone Sand & Gravel, Inc.
675	Washington	Wn-C	IM-1315	Chesterhill Stone Co.
676	Portage	Pe-M	IM-1312	Mils Rock, Sand, & Soil, Inc.

SANDSTONE/CONGLOMERATE ▼

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
4	Coshocton	Cn-13	IM-397	Briar Hill Stone Co.
5	Coshocton	Cn-659	IM-232	Briar Hill Stone Co.
6	Coshocton	Cn-686	IM-504	Briar Hill Stone Co.
7	Coshocton	Cn-692	IM-294	Briar Hill Stone Co.
8	Coshocton	Cn-695	IM-402	Briar Hill Stone Co.
13	Cuyahoga	Cya-42	IM-686	Boyas Excavating, Inc.
14	Erie	Ee-21	IM-416	Cleveland Quarries
17	Geauga	Gea-3	IM-89	Best Sand Corp.
18	Geauga	Gea-1	IM-163	R. W. Sidley, Inc.
19	Holmes	Hs-49	IM-418	Briar Hill Stone Co.
20	Huron	Hrn-8	IM-268	Mesenburg Bros., Inc.
23	Knox	Kx-12	IM-445	Briar Hill Stone Co.
24	Knox	Kx-1	IM-269	Oglebay Norton Industrial Sands, Inc.
27	Lorain	Ln-3	IM-415	Cleveland Quarries
30	Mahoning	Mg-62	IM-599	Gwin Contracting Co.
34	Ross	Rs-16	IM-172	Best Sand Corp.
36	Scioto	So-48	IM-140	Waller Bros. Stone Co.
37	Scioto	So-76	IM-141	Waller Bros. Stone Co.
38	Scioto	So-82	IM-158	Waller Bros. Stone Co.
41	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
42	Tuscarawas	Ts-1660	IM-68	U.S. Silica Co.
43	Washington	Wn-45	IM-125	Alan Stone Co., Inc.
44	Coshocton	Cn-815	IM-939	Briar Hill Stone Co.
45	Pike	Pke-31	IM-835	Best Sand Corp.
46	Coshocton	Cn-809	IM-909	Briar Hill Stone Co.
47	Columbiana	Ca-970	IM-1024	M & M Builders Supply Co.
48	Perry	Py-344	IM-1014	Oglebay Norton Industrial Sands, Inc.
49	Summit	St-24	IM-239	Riverside Sand & Gravel Co., Inc.
50	Geauga	Gea-N	IM-1123	Newbury Sand & Gravel
51	Belmont	Bt-1193	IM-1117	Alan Stone Co., Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
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SANDSTONE/CONGLOMERATE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
53	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
54	Tuscarawas	Ts-2032	IM-1141	Slankard Dozer Service, Inc.
55	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
56	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co., Inc.
57	Columbiana	Ca-888	IM-1181	D. & D. Mining Co.
58	Geauga	Gea-S	IM-161	R. W. Sidley, Inc.
60	Lake	Lke-K	IM-859	Keeney Sand & Stone, Inc.
62	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
63	Tuscarawas	Ts-2024	IM-1087	Green Basin Coal, Inc
64	Wayne	We-26	IM-690, IM-1210	Rash Energy, Inc
65	Columbiana	Ca-982	IM-1108	Leetonia Sand & Gravel Co., Inc.
66	Lorain	Ln-14	IM-1205	Golden Crescent Construction, Inc.
67	Perry	Py-DCC	IM-1192	Dennis Clay Co.
68	Summit	St-60	IM-1206	Ohio Bulk Transfer Co.
70	Portage	Pe-9	IM-119	Oscar Brugmann Sand & Gravel, Inc.
71	Tuscarawas	Ts-1841	IM-45	Belden Brick Co.
72	Columbiana	Ca-S	IM-1258	Solomon's Mines, Inc.
73	Scioto	So-BC	IM-1252	Boone Coleman Construction, Inc.
74	Wayne	We-EA	IM-1259	E. A. Construction, Inc.
75	Lorain	Ln-J	IM-1300	Johnson Stone Products, Inc.
76	Guernesey	Gy-S	IM-1306	R. G. Silvestri Enterprises
77	Trumbull	Tl-12	IM-131	Samco, Inc.
78	Tuscarawas	Ts-1646	IM-44	Belden Brick Co.
79	Gallia	Ga-VFL	IM-1304	Beaver Excavating Inc., VFL Technology Corp.

CLAY/SHALE □

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
1	Ashland	Ald-1	IM-334	London Tile Co.
2	Auglaize	Ae-7		Sandkuhl Clay Works, Inc.
4	Columbiana	Ca-505	IM-13, IM-936	State Line Resources, Inc.
5	Columbiana	Ca-205	IM-74	Summitville Tiles, Inc.
6	Coshocton	Cn-787	IM-610	General Clay Products Corp.
7	Cuyahoga	Cya-19	IM-95	Hydraulic Press Brick Co.
10	Greene	Ge-8	IM-364	Southdown Inc.
11	Harrison	Hn-152	IM-42	Bowerston Shale Co.
12	Hocking	Hg-205	IM-21	General Clay Products Corp.
17	Holmes	Hs-56		Clark Clay Co.
18	Holmes	Hs-77	IM-545	General Clay Products Corp.
19	Holmes	Hs-67	IM-3, IM-768	Holmes Limestone Co.
23	Jackson	Jkn-367	D-0594, D-0968, D-1083, D-892	Waterloo Coal Co., Inc.
31	Licking	Lg-501	IM-257	Bowerston Shale Co.
34	Mahoning	Mg-608	IM-4	ESSROC Cement Corp.
36	Marion	Mn-7	IM-309	Glen-Gery Corp.
37	Medina	Ma-6	IM-455	General Clay Products Corp.
38	Muskingum	Mum-776	IM-256	Bowerston Shale Co.
41	Noble	Ne-66	IM-664	Towne Square Products
42	Paulding	Pg-1	IM-513	Lafarge Corp.
53	Stark	Sk-217	D-0938	Waste Management of Ohio, Inc.
56	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
57	Tuscarawas	Ts-1646	IM-44	Belden Brick Co.
58	Tuscarawas	Ts-1841	IM-45	Belden Brick Co.
59	Tuscarawas	Ts-1939	IM-47	Belden Brick Co.
60	Tuscarawas	Ts-1960	IM-48	Belden Brick Co.
63	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
64	Tuscarawas	Ts-1884	IM-6	L & M Mineral Co.
65	Tuscarawas	Ts-1914	D-0701	L & M Mineral Co.
67	Tuscarawas	Ts-1557, Ts-1558	IM-52	Stone Creek Brick Co.
71	Tuscarawas	Ts-540	IM-28	Zoar Mining Co.
73	Wyandot	Wt-7	IM-407	General Clay Products Corp.
76	Stark	Sk-235	D-865	Holmes Limestone Co.
77	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
79	Columbiana	Ca-947	IM-935	Dome Minerals, Inc.

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SHOWN ON 1997 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued

CLAY/SHALE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
81	Athens	As-594		Athens Hocking Reclamation Center
82	Ashtabula	Asa-14	IM-563	Janson's Soil Service, Inc.
85	Tuscarawas	Ts-520	IM-214	Blue Jay Enterprises of Ts. Co., Inc.
86	Geauga	Gea-9	IM-132	Soltis Sand & Gravel
87	Athens	As-595	IM-1083	Cochran Transportation Services, Inc.
88	Coshocton	Cn-828	IM-1026	William Albert, Inc.
89	Erie	Ee-32	IM-1077	Speer Brothers, Inc.
90	Greene	Ge-44		Southdown Inc.
92	Perry	Lke-M	IM-1059	Mitchell Transport, Inc.
93	Lawrence	Le-B	IM-1188, D-0746	Belville Mining Co., Inc.
99	Pike	Pke-26	IM-142	Valley Materials Co.
101	Preble	Pre-9	IM-1095	Loxley Aggregates, Inc.
103	Tuscarawas	Ts-2024	IM-1087	Green Basin Coal, Inc.
105	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co., Inc.
106	Columbiana	Ca-970	IM-1024	M & M Builders Supply Co.
107	Mahoning	Mg-EM	IM-1056	ESSROC Cement Corp.
108	Perry	Py-338	IM-1092	Dennis Clay Co.
109	Harrison	Hn-B	IM-1020	Bowerston Shale Co.
110	Hocking	Hg-330	IM-1013	General Clay Products Corp.
111	Holmes	Hs-96	IM-997	Spring Run Gravel
114	Richland	Rd-R	IM-1035	Richland Moulded Brick Co.
116	Portage	Pe-61	IM-1064	Red Brush Peat Co.
118	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
122	Muskingum	Mum-904	IM-1127	Valley Clay Mining Co.
123	Stark	Sk-246	IM-1114	American Landfill, Inc.
124	Muskingum	Mum-903	IM-1115	Dennis Clay Co.
127	Columbiana	Ca-989	IM-1110	Summitville Tiles, Inc.
128	Athens	As-533	IM-17	R. A. Eberts Co., Inc.
130	Columbiana	Ca-348	IM-976	D. & D. Mining Co.
135	Mahoning	Mg-632	IM-808	Solomon's Mines, Inc.
136	Ottawa	Oa-19	IM-1153	Brush Wellman, Inc.
137	Perry	Py-344	IM-1014	Oglebay Norton Industrial Sands, Inc.
138	Perry	Py-S1	IM-1183	Swingle Drilling, Inc.
144	Wayne	We-26	IM-690, IM-1210	Mt. Eaton Reclamation
145	Jackson	Jkn-CH1	IM-1182	Cedar Heights Clay Co.
146	Stark	Sk-247	D-0929	Buckeye-Industrial Mining Co.
147	Tuscarawas	Ts-B	IM-49	Belden Brick Co.
148	Knox	Kx-K	IM-870	Board of Knox County Commissioners
150	Ross	Rs-T	IM-1189	Tackett Builders
151	Tuscarawas	Ts-H1	IM-927	Holmes Limestone Co.
152	Washington	Wn-1010	IM-1163	M & J Sand & Gravel
153	Champaign	Cpn-20	IM-482	Moore's Excavating Co.
155	Fairfield	Fd-16	IM-1156	James E. Downard
156	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.
157	Montgomery	My-CW	IM-878	Carter & Carter, Inc.
158	Montgomery	My-W	IM-1207	Weidle Sand & Gravel, Inc.
159	Perry	Py-DCC	IM-1192	Dennis Clay Co.
161	Portage	Pe-89	IM-1142	Green Oaks Potting Products, Inc.
162	Stark	Sk-BE	IM-1202	Beaver Excavating, Inc.
163	Washington	Wn-F	IM-1208	David L. Florence
164	Columbiana	Ca-888	IM-1181	D. & D. Mining Co.
165	Wayne	We-25	IM-1209	Craigton Shale Co.
166	Ashtabula	Asa-18	IM-949	Simak Trucking, Inc.
171	Hocking	Hg-G	IM-1201	Good Builders
173	Perry	Py-V	IM-1245	Valley Clay Mining Co.
174	Stark	Sk-K	IM-1236	Koch Engineering Co., Inc.
176	Muskingum	Mum-DCC	IM-1220	Dennis Clay Co.
177	Tuscarawas	Ts-BB	IM-1221	Belden Brick Co.
178	Columbiana	Ca-987	D-0928	Buckeye-Industrial Mining Co.
179	Wayne	We-11	IM-547	Prairie Lane Sand & Gravel Co.
181	Coshocton	Cn-JT	IM-1253	Oxford Mining Co., Inc.
182	Lawrence	Le-PH	IM-1268	P & H Construction
183	Stark	Sk-O	IM-1276	Oldtown Coal Co.
184	Trumbull	Tl-12	IM-131	Samco, Inc.
185	Wayne	We-EA	IM-1259	E. A. Construction, Inc.

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CLAY/SHALE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
186	Columbiana	Ca-BIM	IM-1271	Buckeye-Industrial Mining Co.
187	Coshocton	Cn-O	IM-1256	Oxford Mining Co., Inc.
188	Harrison	Hn-CD	D-1105	Chambers Development of Ohio, Inc.
189	Stark	Sk-BI	D-1043	Buckeye-Industrial Mining Co.
190	Hamilton	Hmn-72	IM-1264	Rumpke Mountain Mining Co.
191	Holmes	Hs-VH	IM-1263	John Van Horn Trucking
192	Tuscarawas	Ts-2041	D-1116	L & M Mineral Co.
193	Wayne	We-15	IM-398	Zollinger Sand & Gravel Co.
194	Columbiana	Ca-S	IM-1258	Solomon's Mines, Inc.
195	Jackson	Jkn-CH2	IM-1302	Cedar Heights Clay Co.
197	Noble	Ne-S	IM-913	Sharon Stone Co.
198	Ottawa	Oa-BF	IM-1287	Browning-Ferris Industries of Ohio, Inc.
199	Portage	Pe-101	IM-1154	D & K Materials, Inc.
200	Stark	Sk-B	D-1123	Buckeye-Industrial Mining Co.
201	Tuscarawas	Ts-BJ	IM-1285	Blue Jay Enterprises of Ts. Co., Inc.
202	Gallia	Ga-VFL	IM-1314	VFL Technology Corp., Beaver Excavating, Inc.
203	Stark	Sk-208	D-1015, D-1144	ENZ, Inc.
204	Portage	Pe-84	IM-868	Twinsburg Development Corp
205	Perry	Py-D1	IM-1304	Dennis Clay Co.

SALT ■ ■

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
1	Cuyahoga	Cya-30		Cargill Incorporated, Akzo Nobel Salt, Inc.
2	Lake	Lke-6		Morton International, Inc.
3	Licking	Lg-45		R. H. Penick Co.
4	Summit	St-9127		Cargill Incorporated
5	Wayne	We-9129		Morton International, Inc.

GYPSUM ◆

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
1	Ottawa	Oa-2	IM-344	Celotex Corp.

PEAT ◇

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mines and Reclamation permit number</i>	<i>Name of operator</i>
2	Champaign	Cpn-9		Sphagnum Moss Peat Farm
4	Williams	Ws-17		Lingvai Peat Co.
7	Portage	Pe-89	IM-1142	Green Oaks Potting Products, Inc.
9	Portage	Pe-61	IM-1064	Red Brush Peat Co.
10	Montgomery	My-41	IM-360	Moraine Materials Co., Inc.

163 590

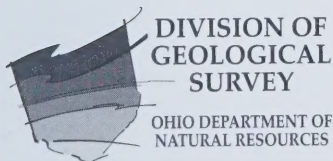
STATE OF OHIO
George V. Voinovich, Governor
DEPARTMENT OF NATURAL RESOURCES
Donald C. Anderson, Director
DIVISION OF GEOLOGICAL SURVEY
Thomas M. Berg, Chief

MINERAL INDUSTRIES MAP OF OHIO

1997

COMPILED BY
MARK E. WOLFE

This map based on operators listed in the 1997 *Report on Ohio mineral industries* and is intended for general reference. Assistance with locations was received from the Ohio Department of Natural Resources, Division of Mines and Reclamation.



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- MINES, QUARRIES, AND PREP PLANTS
- Coal, underground
 - Coal, strip
 - ◆ Gypsum
 - Limestone/dolomite
 - ◇ Peat
 - Salt, brine
 - ▣ Salt, rock
 - ▢ Sand and gravel
 - △ Sand and gravel dredging operation
 - ▼ Sandstone/conglomerate
 - Clay/shale

Locations are approximate. Numbers opposite symbols are map-location numbers assigned to operators listed in the alphabetical directories of the Division of Geological Survey's *Report on Ohio mineral industries*. The operator of a mine or quarry may be determined from the directories by use of the map-location commodity symbol, number, and county name. A list of operators by commodity and map-location number is also provided.

MINERAL INDUSTRIES MAP OF OHIO 1997

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Cartography by Lisa Van Doren

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